FARG'ONA DAVLAT UNIVERSITETI
HUZURIDAGI PEDAGOG KADRLARNI
QAYTA TAYYORLASH VA ULARNING
MALAKASINI OSHIRISH
MINTAQAVIY MARKAZI

"XORIJIY TILNI O'QITISHDA SUN'IY INTELLEKT TEXNOLOGIYALARIDAN FOYDALANISH"

O‘ZBEKISTON RESPUBLIKASI
OLIY TA’LIM, FAN VA INNOVATSIYALAR VAZIRLIGI

OLIY TA’LIM TIZIMI KADRLARINI QAYTA TAYYORLASH VA MALAKASINI OSHIRISH INSTITUTI

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“XORIJIY TILNI O’QITISHDA SUN’IY INTELLEKT TEXNOLOGIYALARIDAN FOYDALANISH”

moduli bo‘yicha

“Filologiya va tillarni o‘qitish:ingliz tili” yo’nalishi

O‘QUV -USLUBIY MAJMUA

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Modulning ishchi dasturi Oliy ta’lim, fan va innovatsiyalar vazirligining 2024-yil 27 dekabrdagi 485-sonli buyrug‘i bilan tasdiqlangan oliy ta’lim muassasalari rahbar kadrlarini qayta tayyorlash va malaka oshirish yo‘nalishlari o‘quv reja va dasturlariga muvofiq ishlab chiqilgan.

Tuzuvchilar: **D.Usmonova - FDU ingliz filologiyasi kafedrasi v.b. dotsent**

Taqrizchilar: **N.Abbasova** - FarDU ingliz tili amaliy kursi kafedrasi mudiri (PhD)

MUNDARIJA

I. ISHCHI DASTUR

Kirish

Ushbu dastur O‘zbekiston Respublikasining 2020-yil 23-sentabrda tasdiqlangan “Ta’lim to‘g‘risida” Qonuni, O‘zbekiston Respublikasi Prezidentining 2015-yil 12-iyundagi “Oliy ta’lim muassasalarining rahbar va pedagog kadrlarini qayta tayyorlash va malakasini oshirish tizimini yanada takomillashtirish to‘g‘risida” PF-4732-son, 2019-yil 27-avgustdagi “Oliy ta’lim muassasalari rahbar va pedagog kadrlarining uzluksiz malakasini oshirish tizimini joriy etish to‘g‘risida” PF-5789-son, 2019-yil 8-oktabrdagi “O‘zbekiston Respublikasi oliy ta’lim tizimini 2030 yilgacha rivojlantirish konsepsiyasini tasdiqlash to‘g‘risida” PF-5847-son, 2020 yil 29 oktabrdagi “Ilm-fanni 2030 yilgacha rivojlantirish konsepsiyasini tasdiqlash to‘g‘risida” PF-6097-son, 2022-yil 28-yanvardagi “2022-2026 yillarga mo‘ljallangan Yangi O‘zbekistonning taraqqiyot strategiyasi to‘g‘risida” PF-60-son, 2023-yil 25-yanvardagi “Respublika ijro etuvchi hokimiyat organlari faoliyatini samarali yo‘lga qo‘yishga doir birinchi navbatdagi tashkiliy chora-tadbirlar to‘g‘risida” PF-14-son, O‘zbekiston Respublikasi Prezidentining 2023-yil 11-sentabrdagi “O‘zbekiston 2030” strategiyasi to‘g‘risida” PF-158-son Farmonlari, shuningdek, O‘zbekiston Respublikasi Prezidentining 2024 yil 21 iyundagi “Aholi va davlat xizmatchilarining korrupsiyaga qarshi kurashish sohasidagi bilimlarini uzluksiz oshirish tizimini joriy qilish chora-tadbirlari to‘g‘risida” PQ-228-son O‘zbekiston Respublikasi Prezidentining 2021 yil 17 fevraldagi “Sun’iy intellekt texnologiyalarini jadal joriy etish uchun shart-sharoitlar yaratish chora-tadbirlari to‘g‘risida” PQ-4996-son qarorlari va O‘zbekiston Respublikasi Vazirlar Mahkamasining “Oliy ta’lim muassasalari rahbar va pedagog kadrlarining malakasini oshirish tizimini yanada takomillashtirish bo‘yicha qo‘shimcha chora-tadbirlar to‘g‘risida” 2019-yil 23-sentabrdagi 797-son hamda O‘zbekiston Respublikasi Vazirlar Mahkamasining “Oliy ta’lim tashkilotlari rahbar va pedagog kadrlarini qayta tayyorlash va malakasini oshirish tizimini samarali tashkil qilish chora-tadbirlari to‘g‘risida” 2024-yil 11-iyuldagi 415-son Qarorlarida belgilangan ustuvor vazifalar mazmunidan kelib

chiqqan holda tuzilgan bo‘lib, u oliy ta’lim muassasalari pedagog kadrlarining kasb mahorati hamda innovatsion kompetentligini rivojlantirish, sohaga oid ilg‘or xorijiy tajribalar, yangi bilim va malakalarni o‘zlashtirish, shuningdek amaliyotga joriy etish ko‘nikmalarini takomillashtirishni maqsad qiladi.

Dastur doirasida berilayotgan mavzular ta’lim sohasi bo‘yicha pedagog kadrlarni qayta tayyorlash va malakasini oshirish mazmuni, sifati va ularning tayyorgarligiga qo‘yiladigan umumiy malaka talablari va o‘quv rejalari asosida shakllantirilgan bo‘lib, uning mazmuni yangi O‘zbekistonning taraqqiyot strategiyasi va jamiyatning ma’naviy asoslarini yoritib berish, oliy ta’limning normativ-huquqiy asoslari bo‘yicha ta’lim-tarbiya jarayonlarini tashkil etish, pedagogik faoliyatda raqamli kompetensiyalarni rivojlantirish, ilmiy-innovatsion faoliyat darajasini oshirish, pedagogning kasbiy kompetensiyalarini rivojlantirish, ta’lim sifatini ta’minlashda baholash metodikalaridan samarali foydalanish, Chet tili o’qitish metodikasining zamonaviy tendensiyalari bo‘yicha tegishli bilim, ko‘nikma, malaka va kompetensiyalarni rivojlantirishga yo‘naltirilgan.

Qayta tayyorlash va malaka oshirish yo‘nalishining o‘ziga xos xususiyatlari hamda dolzarb masalalaridan kelib chiqqan holda dasturda tinglovchilarning maxsus fanlar doirasidagi bilim, ko ‘nikma, malaka hamda kompetensiyalariga qo‘yiladigan talablar o‘zgartirilishi mumkin.

Modulning maqsadi va vazifalari

Modulning maqsadi – pedagog kadrlarning innovatsion yondoshuvlar asosida o‘quv-tarbiyaviy jarayonlarni yuksak ilmiy-metodik darajada loyihalashtirish, sohadagi ilg‘or tajribalar, zamonaviy bilim va malakalarni o‘zlashtirish va amaliyotga joriy etishlari uchun zarur bo‘ladigan kasbiy bilim, ko‘nikma va malakalarini takomillashtirish, shuningdek ularning ijodiy faolligini rivojlantirishdan iborat. Ushbu fan sun’iy intellekt (SI) texnologiyalaridan foydalangan holda xorijiy tilni o‘qitish jarayonini takomillashtirish, ta’lim jarayonini individuallashtirish va samaradorligini oshirish bo‘yicha nazariy va amaliy bilimlarni shakllantirishni maqsad qiladi.

Vazifalari - o‘quv jarayonini tashkil etish va uning sifatini ta’minlash borasidagi ilg‘or xorijiy tajribalar, zamonaviy yondashuvlarni o‘zlashtirish; tinglovchilarga chet tillarini o’qitishning yangi innovatsion metodlari bilan tanishtirish; kommunikativ til o’qitishning afzallikalri, xorijiy tillar fanini o‘qitishning zamonaviy metodlarini o’qitishda nimalarga e’tibor qaratish va inobatga olish, ulardan dars ishlanmalarini yaratishda va tuzishda, talabalar auditoriyasida unumli foydalanish usullarini o’rgatadi. Sun’iy intellekt tushunchasi va uning ta’limdagi o‘rni – Sun’iy intellekt texnologiyalarining asosiy tushunchalarini, xorijiy til ta’limidagi roli va imkoniyatlarini o‘rganish. Xoijiy til o‘qitishda SI vositalaridan foydalanish – Nutqni aniqlash, tarjima tizimlari, chat-botlar, interaktiv platformalar va boshqa vositalar yordamida til o‘rgatish jarayonini optimallashtirish. Adaptiv o‘qitish va differensial yondashuv – SI asosida har bir o‘quvchining til o‘rganish darajasi va ehtiyojlariga mos o‘quv materiallarini yaratish va taqdim etish. SI yordamida til kompetensiyalarini rivojlantirish – Tinglab tushunish, yozish, o‘qish va gapirish kabi til ko‘nikmalarini rivojlantirishda sun’iy intellekt imkoniyatlaridan foydalanish. Interaktiv va o‘zaro ta’sirli ta’lim muhitini yaratish – Virtual suhbatdoshlar, ovozli yordamchilar, gamifikatsiya (o‘yinlashtirish) elementlari va boshqa ilg‘or yondashuvlardan foydalanish. SI vositalari yordamida baholash tizimini takomillashtirish – Til o‘rganish jarayonini samarali baholash uchun avtomatlashtirilgan testlar va diagnostika tizimlarini ishlab chiqish. Sun’iy intellekt texnologiyalarining afzalliklari va cheklovlarini tahlil qilish – SI texnologiyalarining xorijiy til o‘qitishdagi afzalliklari va potensial muammolarini o‘rganish, ularni yechish strategiyalarini ishlab chiqish. O‘qituvchilarning sun’iy intellekt texnologiyalaridan foydalanish kompetensiyasini shakllantirish – Pedagoglarni SI texnologiyalaridan samarali foydalanishga o‘rgatish, ularning malakasini oshirish.

Modul bo’yicha talabalarning tasavvur, bilim, ko’nikma va malakalariga qo’yiladigan talablar

Modul bo‘yicha tinglovchilar quyidagi bilim, ko‘nikma, malaka hamda kompetensiyalarga ega bo‘lishlari talab etiladi:

Tinglovchi:

- ingliz tili fanidagi zamonaviy yondashuvlar, kompetentlik, kommunikativ, integrallashgan yondashuvlar, ularning asosiy tamoyillarini;
- shaxsga yo‘naltirilgan, integral yondashuv va kommunikativ, lingvistik, sosiolingvistik, diskursiv, strategik, kasbiy, umummadaniy kompetentlikni integrallash tamoyillarini;
- innovatsiya va innovatsion texnologiyalarning ta'rifi, tasnifi, ta'lim-tarbiya jarayonida innovatsion texnologiyalardan foydalanish yo‘llarini;
- o‘quv jarayonini faollashtirishda innovasityalar, faollashtirish mezonlarini bilishi kerak.

Tinglovchi:

- til o’qitish tamoyillarini;
- kommunikativ yondashuvda til o’qitish haqida bilimlarni;
- ingliz tilini o‘yin va rolli o‘yinlar orqali tashkillashtirish kompetensiyalariga ega bo‘lishi;
- zamonaviy ta’lim tizimida sun’iy intellekt (AI) ning ahamiyatini;
- ingliz tili fanidagi zamonaviy yondashuvlar, kompetentlik, kommunikativ, integrallashgan yondashuvlar, ularning asosiy tamoyillarini;
- til o‘qitishdagi turli xorijiy yondashuvlar hamda ularni til o‘qitilayotgan va o‘rganilayotgan sharoitga qarab to‘g'ri qo‘llay olish;
- ingliz tilini o‘yin va rolli o‘yinlar orqali tashkillashtirish

kompetensiyalariga ega bo‘lishi lozim.

Tinglovchi:

- sun’iy intellekt texnologiyalaridan foydalanish kompetensiyasini shakllantirish;
- SI texnologiyalaridan samarali foydalanishta’lim ko’nikmalarini shakllantirish;
- Darsni shakllantirishda SI maqsadlarini o’rgatish;
- darsliklarni tahlil qilib, o’z auditoriyasiga moslash;

- darsni tashkil etishda milliy standartlarni inobatga olish;
- darsni shakllantirishda dars maqsadlarini to’g’ri qo’yish;
- o’quv materiallarining qiyinchilik darajasini aniqlash va tahlil qilish;
- o’quv materiallarini tanlash strategiyalarini bilish;
- o’quv materiallarini yaratishda asosiy tamoyillarni bilish;
- o’quv materiallarini ehtiyojga moslay olish;
- autentik manbalardan foydalangan holda dars ishlanmalarini yaratish;
- interfaol texnologiyalar va ulardan samarali foydalanish **ko’nikma** ega bo’lishi lozim.

Tinglovchi:

- chet tilini o’qitishning horij tajribasini tahliliy o’rganish, umumlashtirish, ularning yutuqlaridan ta’lim jarayonida foydalanish;
- CEFR talablaridan kelib chiqqan holda baholash turlari, usullari va metodlarini tanlash va qo’llash;
- kommunikativ kompetensiyani aniqlash xususiyatlariga mos yondashuvlarni tanlash;
- zamonaviy metodlarni o’quv jarayonida faol qo’llay olish malaka va kompetensiyalarini egallashi lozim.

Modulni tashkil etish va o‘tkazish bo‘yicha tavsiyalar

“Xorijiy tilni o’qitishda sun’iy intellekt texnologiyalaridan foydalanish” moduli ma’ruza va amaliy mashg‘ulotlar shaklida olib boriladi. Modulni o‘qitish jarayonida ta’limning zamonaviy metodlari, axborot-kommunikatsiya texnologiyalari qo‘llanilishi nazarda tutilgan:

- darslarda zamonaviy kompyuter texnologiyalari yordamida prezentatsion va elektron-didaktik texnologiyalardan;
- SI vositalarini dars jarayoniga integratsiya qilish bo‘yicha metodik materiallar ishlab chiqish.

- SI yordamida har bir o‘quvchining ehtiyojlariga mos ta’lim yo‘nalishini belgilash.

- o‘tkaziladigan amaliy mashg‘ulotlarda texnik vositalardan, ekspress-so‘rovlar, test so‘rovlari, aqliy hujum, guruhli fikrlash, kichik guruhlar bilan ishlash, kollokvium o‘tkazish va boshqa interaktiv ta’lim usullarini qo‘llash nazarda tutiladi.

Modulning o‘quv rejadagi boshqa modullar bilan bog‘liqligi va uzviyligi

“Xorijiy tilni o’qitishda sun’iy intellekt texnologiyalaridan foydalanish” moduli mazmuni o‘quv rejadagi mutaxassislik o’quv modullarining barcha sohalari bilan uzviy bog’langan holda professor-o’qituvchilarning umumiy kasbiy tayyorgarlik darajasini oshirishga xizmat qiladi.

Modulning oliy ta’limdagi o‘rni

Modulni o‘zlashtirish orqali tinglovchilar chet tilini o’qitishda zamonaviy metodlardan unumli foydalanib, dars mashg’ulotlarini kommunikativ usullarda olib borish kabi kasbiy kompetentlikka ega bo’ladilar.

Modul bo‘yicha soatlar taqsimoti

№	Modul mavzulari	Auditoriya o‘quv yuklamasi		
		Jami	Nazariy	Amaliy mashg‘ulot
1.	Sun’iy intellektga kirish. Sun’iy intellektning tarixiy rivojlanishi, asosiy tushunchalari, turlari va amaliyotda qo’llanilishi.	2	2	
2.	Xorijiy til ko’nikmalarini o’qitishda sun’iy intellektdan foydalanish. Tinglab tushunish ko’nikmasini o’qitishda sun’iy intellekt texnologiyalari.	2		2
3.	Yozish ko’nikmasini baholashda sun’iy intellekt. Gapirish va talaffuz ko’nikmalarini o’qitishda sun’iy intellektdan foydalanish.	2		2
	Jami:	**6**	**2**	**4**

II. MODULNI O'QITISHDA FOYDALANILADIGAN INTERFAOL TA'LIM METODLARI

Klaster metodi: ushbu metod o'z mohiyatiga ko'ra o'zlashtirilgan bilimlarni tahlil va sentez qilish asosida asosiy hamda ikkinchi darajali ma'lumotlar sifatida guruhlarga ajratish imkonini beradi. Metodni qo'llashda quyidagi harakatlar amalga oshiriladi:

Tinglovchilar faoliyatining samaradorligini ta'minlash uchun ularning e'tiborlariga quyidagi jadvallarni taqdim etish maqsadga muvofiqdir.

Namuna: Brainstorm the notion of "Text"

Assesment metodi

Metodning maqsadi: mazkur metod ta'lim oluvchilarning bilim darajasini baholash, nazorat qilish, o'zlashtirish ko'rsatkichi va amaliy ko'nikmalarini tekshirishga yo'naltirilgan. Mazkur texnika orqali ta'lim oluvchilarning bilish faoliyati turli yo'nalishlar (test, amaliy ko'nikmalar, muammoli vaziyatlar mashqi, qiyosiy tahlil, simptomlarni aniqlash) bo'yicha tashhis qilinadi va baholanadi.

Metodni amalga oshirish tartibi:

Assesment lardan ma'ruza mashg'ulotlarida talabalarning yoki qatnashchilarning mavjud bilim darajasini o'rganishda, yangi ma'lumotlarni bayon qilishda, seminar, amaliy mashg'ulotlarda esa mavzu yoki ma'lumotlarni o'zlashtirish darajasini baholash, shuningdek, o'z-o'zini baholash maqsadida individual shaklda foydalanish tavsiya etiladi. Shuningdek, o'qituvchining ijodiy yondashuvi hamda o'quv maqsadlaridan kelib chiqib, assesmentga qo'shimcha topshiriqlarni kiritish mumkin. Namuna:

Identify text genres presented in the fragments below:

A	B	C
_____ (Polonius:) What do you read my	_____Once upon	_____Once upon a time there was a noble

lord? (Hamlet:) Words, words, words.	a time there was a noble knight, who lived in this castle, which is on the borders of fairyland	knight, who lived in this castle, which is on the borders of fairyland

“B B B” metodi

Metodning maqsadi: Mazkur metod o‘quvchilarda yangi axborotlar tizimini qabul qilish va bilmlarni o‘zlashtirilishini yengillashtirish maqsadida qo‘llaniladi, shuningdek, bu metod o‘quvchilar uchun xotira mashqi vazifasini ham o‘taydi. Namuna:

Bilardim	Bilishni xohlardim	Bilib oldim

“Tushunchalar tahlili” metodi

Metodning maqsadi: mazkur metod talabalar yoki qatnashchilarni mavzu buyicha tayanch tushunchalarni o‘zlashtirish darajasini aniqlash, o‘z bilimlarini mustaqil ravishda tekshirish, baholash, shuningdek, yangi mavzu buyicha dastlabki bilimlar darajasini tashhis qilish maqsadida qo‘llaniladi. Metodni amalga oshirish tartibi:

- ishtirokchilar mashg‘ulot qoidalari bilan tanishtiriladi;
- o‘quvchilarga mavzuga yoki bobga tegishli bo‘lgan so‘zlar, tushunchalar nomi tushirilgan tarqatmalar beriladi (individual yoki guruhli tartibda);
- o‘quvchilar mazkur tushunchalar qanday ma’no anglatishi, qachon, qanday holatlarda qo‘llanilishi haqida yozma ma’lumot beradilar;
- belgilangan vaqt yakuniga yetgach o‘qituvchi berilgan tushunchalarning tugri va tuliq izohini uqib eshittiradi yoki slayd orqali namoyish etadi;

- har bir ishtirokchi berilgan tugri javoblar bilan uzining shaxsiy munosabatini taqqoslaydi, farqlarini aniqlaydi va o‘z bilim darajasini tekshirib, baholaydi.

Namuna: ‘Moduldagi tayanch tushunchalar tahlili”

Aqliy xujum metodi

Mazkur metod muayyan mavzu yuzasidan berilgan muammolarni hal etishda keng qo‘llaniladigan metod sanalib, u mashg‘ulot ishtirokchilarini muammo xususida keng va har tomonlama fikr yuritish hamda o‘z tasavvurlari va g‘oyalarni ijobiy foydalanish borasida ma’lum ko‘nikma hamda malakalarni hosil qilishga rag‘batlantiriladi. Bu metod yordamida tashkil etilgan mashg‘ulotlar jarayonida ixtiyoriy muammolar yuzasidan bir necha original yechimlarni topish imkoniyati tug‘iladi. Aqliy xujum metodi tanlab olingan mavzular doirasida ma’lum qadriyatlar aniqlash va ularga muqobil bo‘lgan g‘oyalarni tanlash uchun sharoit yaratadi. Dars jarayonida “Aqliy xujum” metodidan foydalanishda quyidagi qoidalarga amal qilish talab etiladi:

1. O‘quvchilarni muammo doirasida keng fikr yuritishga undash, ularning mantiqiy fikrlarni bildirishlariga erishish.

2. Har bir o‘quvchi tomonidan bildirilayotgan firklar rag‘batlantirilib boriladi. Bildirilgan fikrlar orasidan eng maqbullari tanlab olinadi.Fikrlarning rag‘batlantirilishi navbatdagi yangi fikrlarning tug‘ilishiga olib keladi.

3. Har bir o‘quvchi o‘zining shaxsiy fikrlariga asoslanishi va ularni o‘zgartirishi mumkin. Avval bildirilgan fikrlarni umumlashtirish, turkumlashtirish yoki ularni o‘zgartirish ilmiy asoslangan fikrlarning shakllanishiga zamon hozirlaydi.

4. Mashg‘ulot jarayonida o‘quvchilar faoliyatini standart talab asosda nazorat qilish, ular tomonidan bildirilayotgan fikrlarni baholashga yo‘l quyilmaydi. Ularning fikrlari baholanib borilsa o‘quvchilar diqqatlarini shaxsiy fikrlarini himoya qilishga qaratadilar, oqibatda yangi fikrlar ilgari surilmaydi. Metodni qo‘llashdan ko‘zlangan asosiy maqsad o‘quvchilarni muammo bo‘yicha keng fikr yuritishga undash ekanligini yodda tutgan holda ularning faoliyatini baholab borishdan voz kechish maqsadga muvofiqdir.

Namuna:

Brainstorming. Form 4 groups and discuss the following problems. Share your ideas with other groups

Group 1 Discuss the role of extralinguistic factors in the process of text interpretation

Group 2 How can the communicative postulates be applied to textual communication

Group 3 Characterize the communicative postulates formulated by G. Grice

Group 4 Comment on communicative principles suggested by T.A. van Dijk and G. N. Leech

“Portfolio” metodi

“Portfolio” (ital. portfolio-portfel, ingl.hujjatlar uchun papka)ta’limiy va kasbiy faoliyat natijalarini autentik baholashga xizmat qiluvchi zamonaviy ta’lim texnologiyalaridan hisoblanadi. Portfolio mutaxassisning saralangan o‘quv-metodik ishlari, kasbiy yutuqlari yig‘indisi sifatida aks etadi. Jumladan, talaba yoki tinglovchilarning modul yuzasidan o‘zlashtirish natijasini elektron portfoliolar orqali tekshirish mumkin bo‘ladi. Oliy ta’lim muassasalarida portfolioning quyidagi turlari mavjud:

Faoliyat Turi	Ish shakli	
	Individual	Guruhiy
Ta’limiy faoliyat	Talabalar portfoliosi, bitiruvchi, doktorant, tinglovchi portfoliosi va boshq.	Talabalar guruhi, tinglovchilar guruhi portfoliosi va boshq.
Pedagogik Faoliyat	O‘qituvchi portfoliosi, rahbar xodim portfoliosi	Kafedra, fakultet, markaz, OTM portfoliosi va boshq.

III.NAZARIY MASHGULOT MATERIALLARI

Lecture 1. Introduction to Artificial Intelligence. The historical development of artificial intelligence, key concepts, types, and its application in practice.

Plan:

1. Introduction to the course. The significance of AI in today's world
2. Historical Development of AI.

2.1 Early Concepts: Ancient myths and early automation (Greek myths, mechanical automatons)

2.2 Birth of AI (1950s-1970s): Turing Test, Dartmouth Conference (1956), early AI programs

2.3 AI Winters (1970s-1990s): Funding cuts and slow progress

2.4 AI Renaissance (1990s-2010s): Machine learning breakthroughs, deep learning

2.5 Modern AI (2010s-Present): Neural networks, generative AI, and real-world applications

3. Key Concepts of AI

3.1 Machine Learning (ML) – Supervised, Unsupervised, and Reinforcement Learning

3.2 Deep Learning – Neural networks, how they work

3.3 Natural Language Processing (NLP) – Chatbots, translation, speech recognition

3.4 Computer Vision – Image recognition, autonomous vehicles

4. Ethics and Bias in AI – Fairness, transparency, and responsible AI
5. Questions and interactive discussion

Key words; artificial intelligence (ai), machine learning (ml), deep learning, natural language processing (NLP), computer vision, fairness, bias, transparency, responsible ai, predictive analytics

1. Introduction to Artificial Intelligence

Artificial Intelligence (AI) refers to the ability of machines and computer systems to simulate human intelligence. It involves creating algorithms that allow computers to learn, reason, problem-solve, and make decisions.

Key characteristics of AI:

Learning: AI systems improve over time based on data (machine learning).

Reasoning: AI can analyze data and draw conclusions.

Perception: AI can interpret visual, audio, and textual information (e.g., facial recognition, speech recognition).

Autonomy: AI systems can operate without continuous human intervention.

2. Significance of AI in Today's World

AI is transforming industries and everyday life, making processes faster, more efficient, and sometimes even more accurate than human efforts. Some key reasons why AI is important today:

Automation: AI automates repetitive tasks, increasing productivity (e.g., chatbots in customer service, self-checkout systems).

Efficiency & Speed: AI processes large amounts of data quickly (e.g., medical diagnosis, financial predictions).

Personalization: AI helps tailor experiences to individual users (e.g., Netflix recommendations, targeted ads).

Innovation: AI contributes to the development of new technologies (e.g., self-driving cars, generative AI tools like ChatGPT).

3. Goals and Impact of AI in Different Fields

AI is developed with several objectives in mind, influencing various industries. Some key goals and their impact include:

Improving Decision-Making: AI analyzes large datasets to support better decision-making (e.g., AI in finance predicts market trends).

Enhancing Human Abilities: AI assists professionals in performing tasks more accurately (e.g., AI-assisted surgery).

Reducing Human Effort and Errors: AI automates repetitive tasks with precision (e.g., industrial robots in manufacturing).

Creating Smart and Interactive Systems: AI enables virtual assistants, smart homes, and IoT devices to interact with users intelligently.

Impact of AI Across Different Sectors:

Field	Impact of AI
Education	AI tutors, personalized learning, automated grading
Healthcare	AI diagnosis, robotic surgery, drug discovery
Finance	Fraud detection, algorithmic trading, risk assessment
Transportation	Self-driving cars, AI traffic management
Entertainment	AI-generated content, music, and video recommendations
Customer Service	AI chatbots, virtual assistants

1. Historical Development of AI.

Early Concepts: Ancient Myths and Early Automation

Long before the development of modern AI, humans imagined intelligent machines through mythology and early mechanical inventions.

Ancient Myths: Many cultures envisioned artificial beings with intelligence. Greek Mythology: Talos, a giant bronze automaton built by Hephaestus, protected Crete. Chinese & Indian Myths: Stories of artificial beings created by gods or sages.

Mechanical Automatons: Al-Jazari (12th Century): Designed water-powered machines, including humanoid robots.

Leonardo da Vinci (15th Century): Sketched plans for a mechanical knight.

18th-19th Century Automata: Clockwork dolls and mechanical birds amazed audiences.

These early concepts laid the groundwork for the idea that intelligence could be artificially created.

Birth of AI (1950s-1970s): The Beginning of Modern AI

The foundations of AI as a scientific field were established in the mid-20th century.

Alan Turing and the Turing Test (1950): Proposed the Turing Test to determine if a machine could exhibit human-like intelligence. Introduced the idea of machines learning from data.

Dartmouth Conference (1956): Organized by John McCarthy, Marvin Minsky, Nathaniel Rochester, and Claude Shannon. Considered the birthplace of AI as a field of research. Defined AI as "the science of making machines do things that require intelligence if done by humans."

Early AI Programs: Logic Theorist (1955): Created by Newell and Simon; the first AI program to solve mathematical problems. ELIZA (1966): A chatbot that simulated human conversation. Shakey the Robot (1969): The first AI-powered mobile robot capable of planning and decision-making. During this period, researchers were highly optimistic about AI’s potential.

AI Winters (1970s-1990s): Funding Cuts and Slow Progress

Despite early enthusiasm, AI faced setbacks due to technical limitations and lack of funding.

- Reasons for AI Winters:
- Overestimated expectations: Early AI could not solve complex problems as expected.
- Limited computing power: Hardware could not support advanced AI models.
- Funding reductions: Governments and companies lost interest in AI research.

Major AI Winter Periods:

- First AI Winter (1974-1980):
- Funding cuts from the U.S. and U.K.
- AI systems struggled with real-world problems.

Second AI Winter (1987-1993):

Japan's ambitious Fifth Generation Computer Project failed to deliver results. Expert systems (rule-based AI) proved too costly and unreliable. This period slowed AI progress, but foundational research continued.

AI Renaissance (1990s-2010s): Machine Learning and Deep Learning

AI research regained momentum with new advancements in computing and data-driven approaches.

Key Breakthroughs:

- Machine Learning (ML): Instead of rule-based programming, computers learned from data.
- Neural Networks: Inspired by the human brain, they improved AI's ability to recognize patterns.

Notable Advances:

- IBM's Deep Blue (1997): Defeated world chess champion Garry Kasparov.

- ❖ Google's AI (2010s): Improved speech recognition and language processing.
- ❖ Siri (2011): Apple's voice assistant brought AI to mainstream users.
- ❖ This period set the stage for modern AI, driven by big data and deep learning.

Modern AI (2010s-Present): The Age of Neural Networks and Generative AI

Today, AI is an essential part of various industries, driven by massive data availability and computing power.

Neural Networks & Deep Learning: Enabled image recognition, natural language processing (NLP), and autonomous systems. Examples: Self-driving cars, real-time translation, and advanced chatbots.

Generative AI (2020s): AI can create text, images, music, and videos. Examples:

ChatGPT & GPT-4: Human-like text generation.

DALL·E & Midjourney: AI-generated images.

DeepMind's AlphaFold: AI-powered protein structure prediction for medical research.

Real-World Applications: AI is now used in education, healthcare, finance, robotics, and creative industries. With continued research, AI is expected to become even more advanced, shaping the future of technology. The journey of AI has been marked by optimism, challenges, and breakthroughs. From ancient myths to self-learning systems, AI continues to evolve, transforming the way we live and work.

3. Key Concepts of AI

1. Machine Learning (ML)

Machine Learning is a branch of AI that enables computers to learn from data and make predictions without being explicitly programmed. It is categorized into three main types:

a) Supervised Learning - The model is trained on labeled data, meaning each input has a corresponding correct output. Example: Spam email detection—AI learns from labeled emails (spam vs. not spam) and classifies new emails accordingly. Other Applications: Image classification, medical diagnosis, and speech recognition.

b) Unsupervised Learning - The model learns patterns and structures from unlabeled data without predefined outputs. Example: Customer segmentation—AI analyzes shopping behaviors to group customers based on their preferences. Other Applications: Fraud detection, recommendation systems (Netflix, Spotify).

c) Reinforcement Learning - The model learns by interacting with an environment and receiving rewards or penalties based on its actions. Example: AlphaGo—AI trained itself to play Go and defeated world champions. Other Applications: Robotics, self-driving cars, game AI.

Deep Learning

Deep Learning is a subset of Machine Learning that uses artificial neural networks to process and analyze large amounts of data.

How Neural Networks Work: Inspired by the human brain, neural networks consist of layers of interconnected nodes (neurons). Data passes through input layers, is processed in hidden layers, and generates an output. The system improves through backpropagation, adjusting connections to minimize errors. Example Applications: Facial recognition: Facebook and Apple use deep learning to identify faces in photos. Autonomous driving: Tesla and Waymo use neural networks to detect pedestrians, road signs, and obstacles. Medical diagnosis: AI scans X-rays and MRI images to detect diseases like cancer.

Natural Language Processing (NLP)

NLP is the field of AI that enables machines to understand, interpret, and generate human language.

- ❖ Key NLP Applications:
- ❖ Chatbots: Virtual assistants like ChatGPT, Siri, Alexa understand and respond to human queries.
- ❖ Machine Translation: Google Translate and DeepL translate languages using AI.
- ❖ Speech Recognition: AI systems like Google Voice, Apple's Siri, and Amazon Alexa convert speech to text and respond intelligently.

Example: When you ask Google Assistant "What's the weather like today?" NLP helps the AI understand your question and generate an accurate response.

Computer Vision allows AI to process and interpret visual data, just like humans.

Image Recognition: AI identifies objects, people, and places in photos.

Example: Facebook's automatic photo tagging feature.

Autonomous Vehicles: AI analyzes real-time road data to make driving decisions.

Example: Tesla's self-driving cars use cameras and sensors to detect lanes, pedestrians, and traffic signals.

Medical Imaging: AI detects diseases in X-ray and MRI scans.

Example: AI-assisted cancer detection in medical imaging.

These AI concepts—Machine Learning, Deep Learning, NLP, and Computer Vision—form the foundation of modern AI applications. Each plays a crucial role in transforming industries, from healthcare to entertainment and transportation.

4. Ethics and Bias in AI – Fairness, Transparency, and Responsible AI

As AI continues to become a dominant force in various sectors, addressing ethical concerns has become increasingly important. Here's a breakdown of key topics related to fairness, transparency, and responsible AI:

1. Fairness in AI

Fairness in AI refers to the need to ensure that AI systems treat all individuals and groups fairly, without discrimination. AI systems should not perpetuate or exacerbate societal inequalities.

Bias in Data:
AI learns from the data it is trained on. If the data contains biases—such as historical inequalities or stereotypes—the AI system can learn and reproduce those biases. For example, an AI recruitment system might favor male candidates if it was trained on a dataset that predominantly features male employees.

Example: A facial recognition system trained primarily on light-skinned faces may be less accurate for individuals with darker skin tones.

Mitigating Bias:

Ensuring that AI training data is diverse and representative of all groups can help mitigate biases.

Regular audits of AI systems to identify and correct biases.

Fairness-aware algorithms can be designed to actively reduce bias in decision-making processes.

Example of Fairness Challenges:

Predictive policing algorithms used by law enforcement agencies can reinforce racial biases if they are trained on biased historical arrest data, potentially leading to unfair targeting of certain communities.

2. Transparency in AI

Transparency in AI refers to the ability to understand and explain how AI systems make decisions. In high-stakes applications (e.g., healthcare, criminal justice), it's crucial for stakeholders to trust and understand the system's reasoning.

Black-box Problem:

Many advanced AI systems, especially those based on deep learning, are considered “black boxes,” meaning their decision-making process is not easily interpretable by humans.

Example: A medical AI that diagnoses diseases may not explain why it suggests a certain diagnosis, making it harder for doctors to understand and trust the AI’s judgment.

Explainable AI (XAI):

Researchers are developing methods for making AI more explainable, especially in sectors where human lives are at risk (e.g., healthcare, autonomous driving).

Example: A credit scoring AI could be more transparent if it explains why an individual was denied credit, based on factors like income, credit history, and spending patterns.

Importance of Transparency:

Accountability: Understanding how decisions are made can help identify when and why errors occur.

Trust: Transparency is vital to building trust with users and stakeholders.

3. Responsible AI

Responsible AI refers to the ethical use and deployment of AI technologies, ensuring that they benefit society while minimizing harm. This involves considering the broader implications of AI on human rights, societal well-being, and long-term sustainability.

AI in Decision-Making:

AI is increasingly being used in critical decision-making processes, such as hiring, sentencing in courts, and granting loans. It's essential that these systems are designed with responsibility to avoid harmful consequences.

Example: AI used in the criminal justice system to determine parole decisions must be carefully designed to avoid reinforcing existing biases and inequalities.

Ethical AI Design Principles:

Accountability: Developers and organizations should be accountable for AI systems and their outcomes.

Human Oversight: AI should complement human decision-making rather than replace it completely, ensuring that human judgment can intervene when needed.

Privacy Protection: AI systems should respect individuals' privacy and comply with data protection regulations, such as GDPR.

AI for Social Good:
AI can also be harnessed for positive societal impact, such as solving environmental issues, improving healthcare access, or aiding in disaster relief.

Example: AI-powered models can help predict natural disasters, allowing for timely evacuations and resource allocation.

Questions for discussion:

1. How can AI-driven personalized learning platforms improve the educational experience for students with different learning styles? Can you think of any challenges that might arise?
2. What are the benefits and potential drawbacks of using AI-powered intelligent tutoring systems in classrooms, especially for subjects that require human interaction like language learning or art?
3. In what ways can AI help reduce the administrative burden on teachers, and how might this impact their role in the classroom?
4. How effective do you think AI-powered chatbots and virtual assistants are in providing timely and accurate student support? Can AI fully replace human teachers in answering student queries?

5. How can AI-driven language learning tools, like speech recognition, contribute to improving pronunciation and language skills? Are there any limitations to this approach?
6. What is the role of predictive analytics in identifying students at risk of falling behind, and how can it be used to improve student success rates?
7. How can AI-powered virtual reality (VR) and augmented reality (AR) applications enhance learning in subjects like science, history, and engineering? Can they fully replace traditional hands-on learning experiences?
8. With the growing role of AI in education, how can schools ensure data privacy and security for students, particularly when using AI platforms to track student performance?

IV. AMALIY MASHG‘ULOT MATERIALLARI

Practical lesson 1. Using Artificial Intelligence in Teaching Foreign Language Skills. Artificial Intelligence Technologies in Teaching Listening Comprehension Skills.

Lesson Objective:

- ✓ To familiarize teachers with how AI can be used to enhance listening comprehension skills in foreign language learning.
- ✓ To provide practical tools and methods for incorporating AI technologies into the classroom.
- ✓ To discuss the benefits and challenges of using AI in teaching listening skills.

Materials Needed:

- ✓ Laptop or tablet with internet access
- ✓ Projector and screen
- ✓ AI-powered language learning tools (e.g., Duolingo, Speech Recognition Apps)
- ✓ Audio clips or video clips in the target foreign language
- ✓ Whiteboard/markers

"What are some challenges you face when teaching listening comprehension?"

Task 1. **Practical Application: Lesson Design**

Objective: Have teachers create a lesson plan incorporating AI tools for listening comprehension.

Group Activity:

Divide teachers into small groups.

Ask each group to design a short lesson using AI tools for listening comprehension (e.g., incorporating a listening task with a tool like Speechling or FluentU).

Groups should outline the following:

The learning objective (e.g., improving understanding of spoken language).

The AI tool used.

The listening activity (e.g., listening to a podcast or dialogue).

Assessment (How will teachers assess student comprehension?).

Group Sharing :

Each group presents their lesson plan and discusses how AI was integrated.

Task 2.

Discussing Benefits and Challenges

Objective: Reflect on the practical use of AI and its impact on teaching listening comprehension.

Open Discussion :

Ask teachers to discuss the benefits and challenges of using AI in the classroom:

Benefits: Personalized learning, accessibility, instant feedback, etc.

Challenges: Over-reliance on technology, access issues, ensuring fairness, potential technical difficulties.

Encourage teachers to share their own experiences and ideas.

Task 3 To read the article and discuss.

Exploring the Application of Artificial Intelligence in Foreign Language Teaching: Challenges and Future Development

MingYang Liu [1,*]

[1] College of Arts and Information Engineering, Dalian Polytechnic University, Dalian Liaoning, China

Abstract. With the rapid development of artificial intelligence (AI) technology, it is increasingly being utilized in the field of education, particularly in foreign language teaching. The concept of education meta-universe is also gaining popularity, and the emergence of ChatGPT has revolutionized traditional foreign language teaching methods. AI technologies such as speech recognition, machine translation, and natural language processing have proven to be effective tools to help students improve their foreign language learning outcomes. However, the application of these technologies also brings some challenges and problems. This paper aims to discuss the impact of AI on foreign language teaching, analyze its advantages and disadvantages, explore its future development trend, and provide suggestions for educators to make better use of AI technologies to assist foreign language teaching.

1 INTRODUCTION

With the rapid development of AI technology, it has been widely applied in various fields around the world, including education[1]. In China, the government has emphasized the importance of integrating AI technology into education, particularly in the context of foreign language learning. In 2018, the Ministry of Education released a plan to promote the integration of AI and education, calling for the development of AI-based education resources and applications.

Meanwhile, in the United States, major tech companies like Google and Microsoft have been investing heavily in AI education technology. Google's "AI for Social Good" initiative aims to use AI to solve some of the world's biggest problems, including education. Microsoft has launched several AI-powered education tools, such as Learning Tools for OneNote, which uses machine learning to improve reading and writing skills.

The concept of an "education meta-universe" has also gained popularity worldwide. The idea is to create a virtual world where students can learn and interact with each other and with AI-based virtual teachers[1]. In this way, AI technologies have the potential to transform traditional foreign language teaching methods and offer new possibilities for language learning.

In particular, AI has played an increasingly significant role in foreign language teaching. Speech recognition technology enables students to practice speaking and listening skills with accurate feedback. Machine translation technology provides immediate access to foreign language materials and facilitates communication between students of different languages. Natural language processing technology helps to identify and correct errors in written work.

However, the application of these technologies also brings challenges and potential disadvantages. For example, AI may not be able to fully replace human teachers, especially in areas such as language expression and interpersonal communication[2]. The mechanized and standardized teaching style of AI may also lack the human touch and personalized teaching styles that some students require. Moreover, the reliability and accuracy of AI technology can be compromised, leading to incorrect feedback and misleading information.

In conclusion, the application of AI technology in foreign language teaching has its advantages and potential drawbacks. Educators should be aware of both aspects and make use of AI technology to enhance language learning outcomes while ensuring the proper balance between AI and human teaching methods[3]. The future development trends of AI in language learning are promising, and continued research and innovation will help educators to make better use of these technologies.

2 APPLICATION OF ARTIFICIAL INTELLIGENCE IN FOREIGN LANGUAGE TEACHING

The application of artificial intelligence technology in foreign language teaching has started to become more and more common. The following are some typical application scenarios:

2.1 Speech recognition technology

Speech recognition technology has proven to be a valuable tool in foreign language learning as it can significantly improve students' communication skills.

* Corresponding author: 214634166@qq.com

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This technology enables learners to receive immediate feedback on their pronunciation and intonation, which is essential in developing their oral expression skills. As a result, students can become more confident in their ability to communicate in a foreign language, and they are more likely to engage in conversations with native speakers.

Moreover, speech recognition technology can help learners improve their listening and comprehension skills. Students can use speech recognition software to listen to recordings of native speakers, and the software can identify any mistakes in their pronunciation. This enables students to hear the correct pronunciation and intonation of words and phrases, thereby improving their understanding of the language.

Speech recognition technology also provides learners with the opportunity to practice their oral expression skills using training materials and oral practice[4,5]. Students can use the software to record themselves speaking, and then compare their recordings to the original recordings of native speakers. This helps students to identify areas that need improvement, and they can work on them to enhance their oral expression skills.

In addition to these benefits, speech recognition technology also enables learners to interact with the language in a more natural way. Students can engage in conversation with the software, which can respond to their questions and comments. This creates a more interactive and engaging learning experience, which can help students develop their language skills more effectively. Overall, speech recognition technology is a valuable tool in foreign language learning, and its continued development will likely lead to even greater benefits for students.

2.2 Machine translation technology

Understanding foreign language text and translating it into your own language are two important challenges when learning a foreign language. Machine translation technology can help students better overcome these challenges and improve the efficiency of foreign language learning.

First, machine translation technology can help students better understand foreign language texts. Especially for those difficult to understand language difficulties or rare words, students can use machine translation tools to get better explanation and understanding. When students encounter difficulties in reading foreign language articles or listening to foreign language recordings, they can use machine translation tools to quickly obtain accurate translation results, so as to better understand foreign language texts. This helps students improve their language understanding abilities in the process of foreign language learning, gradually adapt to the foreign language environment, and lay a solid foundation for higher level foreign language learning.

Secondly, machine translation technology can help students improve the efficiency and quality of translation. In foreign language learning, translation is an indispensable link, but translation usually requires a lot of time and effort[6]. Through machine translation technology, students can complete translation tasks more quickly, thus having more time and energy to learn and consolidate foreign language knowledge. In addition, machine translation technology can also improve the accuracy and quality of translation, avoid errors in translation, and improve students' translation level. These can help students master foreign language knowledge faster, improve their language skills, and better communicate and cooperate with the foreign language community.

2.3 Natural Language Processing Technology

Natural language processing (NLP) technology is a field of artificial intelligence that focuses on the interaction between computers and human language. It is widely used in foreign language teaching to help students better understand the language they are learning[1,8].

One of the main advantages of NLP technology is that it can provide students with personalized learning materials. By analyzing a student's performance in various language areas, NLP software can generate customized learning materials that meet the student's specific needs. For example, if a student is struggling with vocabulary, the software can provide them with a list of words to practice.

Furthermore, NLP technology can help students learn a foreign language in a more natural way. By analyzing authentic language data such as news articles, social media posts, and conversation transcripts, NLP software can help students learn how to use the language in real-world situations. This can make language learning more engaging and relevant for students.

Overall, NLP technology has great potential to revolutionize foreign language teaching and learning. As the technology continues to develop, we can expect to see even more innovative applications that will help students learn a foreign language more effectively and efficiently.

2.4 Chatbot Technology

Chatbot technology is an innovative and effective way to enhance students' foreign language skills. Unlike traditional language learning methods, which may lack the interactivity and flexibility that students need, chatbots provide a personalized and interactive learning experience. By interacting with chatbots, students can practice speaking and listening in a natural and conversational way, just like they would with a real person[9].

Chatbots can provide instant feedback and correction, which is particularly important for language learners. Students can receive feedback on their pronunciation, grammar, and vocabulary usage, and they can make adjustments on the spot. This can help them to improve their language skills more efficiently and effectively.

In addition to providing practice opportunities, chatbots can also serve as a source of language learning materials. For example, ChatGPT can provide learners with real-time translations, definitions, and explanations of complex grammar structures. Learners can also access

a wealth of conversational phrases and expressions that can help them to communicate more effectively in their target language.

Chatbots can be a valuable tool for learners who may not have access to native speakers or language tutors. By engaging with a chatbot, learners can still receive conversational practice and feedback, even if they are unable to practice with a human tutor.

Chatbot technology offers a promising and exciting way to improve foreign language learning outcomes. As technology continues to evolve and improve, we can expect chatbots to become even more sophisticated and effective in helping learners achieve their language learning goals.C.

2.5 Face recognition

Capturing facial expressions, such as changes in the mouth, through face recognition technology can help students better learn a foreign language. When learning a language, students need to constantly practice speaking and listening, and face recognition technology can help students better grasp changes in speech and intonation. For example, when learning English, students need to master the pronunciation rules and phonetic features of English. Through face recognition technology, students can observe the teacher's mouth shape change and pronunciation style in real time, so that they can imitate and learn better. In addition, face recognition technology can help students better understand the facial features of a foreign language when pronouncing and intoning different words and find the key points, thus improving their oral expression and listening comprehension.

3 Advantages and Disadvantages of Artificial Intelligence in Foreign Language Teaching

In foreign language teaching, the application of artificial intelligence (AI) technology has achieved some preliminary results, but it also faces some challenges.

Advantages of AI technology in foreign language teaching can mainly be classified into three aspects:

(1) It can provide students with a large amount of language materials and exercise opportunities. AI technology can provide students with abundant language materials and exercise opportunities through means such as speech recognition and machine translation, thus helping them better master foreign language knowledge and skills.

(2) It can realize personalized education. AI technology can automatically adjust teaching content and methods based on students' learning situations and characteristics, achieving personalized education and improving learning efficiency.

(3) It can improve learning efficiency. AI technology can provide students with fast and accurate language materials and exercise opportunities, helping them to master foreign language knowledge and skills more quickly.

However, AI technology also has some disadvantages in foreign language teaching:

(1) It cannot completely replace the role of human teachers. Although AI technology can provide students with a large amount of language materials and exercise opportunities, it cannot completely replace the role of human teachers, especially in aspects related to language expression and interpersonal communication.

(2) It lacks a humanized teaching approach. The teaching approach of AI technology is relatively mechanized and monotonous, lacking a humanized teaching approach and failing to provide students with more rich and diversified learning experiences.

(3) It has technical limitations and security risks. The application of AI technology has technical limitations and security risks, such as speech recognition technology may not accurately recognize students with heavy accents, machine translation technology may have inaccurate translations, and chatbot technology may lead to personal information leakage for students.

4 Future development trend of artificial intelligence in foreign language teaching

The future development trend of artificial intelligence (AI) in foreign language teaching is expected to be extensive and innovative. With the rapid development of AI technology, it is believed that the application of AI in foreign language teaching will become more intelligent, interactive, personalized, and efficient[9].

Personalized education: AI technology will play a crucial role in better realizing personalized education. AI will be able to analyze data related to individual students' learning situation, strengths, and weaknesses, and adjust teaching content and methods accordingly. This will improve students' learning effectiveness and help them achieve better results in foreign language learning.

Contextualized teaching: AI technology will be better applied to contextualized teaching. By simulating various scenarios and situations, AI will help students better understand and apply foreign language knowledge and skills in real-life contexts. This will make foreign language learning more relevant and practical for students.

Interactive and interesting learning process: AI technology will make foreign language learning more interactive and interesting for students. By means of game-based teaching, virtual reality, and conversational agents, AI will help students learn foreign languages more easily and enjoyably.

Automation of language learning: AI technology will better realize the automation of language learning. AI-powered language learning platforms and robots will enable students to master foreign language knowledge and skills quickly and accurately through voice recognition technology and personalized feedback.

Overall, the future development trend of AI in foreign language teaching will bring more opportunities and challenges that need to be actively explored and applied.

The application of AI technology in foreign language teaching will continue to evolve and improve, making foreign language learning more efficient, engaging, and accessible to all learners.

5 Conclusion

The application of artificial intelligence (AI) technology in foreign language teaching has shown promising initial results. AI has enabled the provision of a vast amount of language materials and practice opportunities, resulting in personalized education and improved learning efficiency[7]. However, AI in foreign language teaching also faces several problems and challenges, such as the inability to replace human teachers completely, a lack of humanized teaching methods, and technical limitations and safety risks.

In the future, AI technology will be better applied and developed in foreign language teaching to achieve personalized education, contextualized teaching, interactive and interesting learning, and automation of language learning[10]. This can be achieved by actively exploring and applying AI technologies to promote the development of foreign language teaching and improve students' learning outcomes.

To ensure the successful implementation of AI technology in foreign language teaching, several suggestions are proposed:

(4) Teachers need to be trained on the basic knowledge of AI technologies and understand how to use these technologies effectively to improve teaching effectiveness and meet students' needs.

(5) The application of AI technology in teaching needs to ensure data security and privacy protection to prevent any malicious use of technology.

(6) AI technology should be applied to personalize education, automatically adjusting teaching content and methods based on students' learning situation and characteristics.

(7) The application of AI technology should be strengthened in contextualized teaching to help students better understand and apply foreign language knowledge and skills by simulating various scenarios and situations.

(8) Humanized teaching methods should be developed by leveraging AI technology's advantages in interactivity and fun to enhance students' interest and motivation in learning.

(9) Continuous exploration and innovation of AI technology's application methods and approaches in foreign language teaching is necessary to improve the teaching effect continuously.

In conclusion, the application of AI technology in foreign language teaching offers both challenges and opportunities. We need to keep exploring and innovating to fully harness the technology's potential to improve students' learning outcomes.

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1. How can AI technologies like speech recognition, machine translation, and NLP improve foreign language learning outcomes?
2. In what ways does AI provide personalized learning experiences for students in foreign language education?
3. What are the potential drawbacks of AI-based foreign language teaching, and how can educators mitigate these issues?
4. Can AI completely replace human teachers in language learning? Why or why not?

5. How can AI chatbots enhance conversational practice for foreign language learners?
6. What ethical and security concerns arise from the use of AI in foreign language education?
7. How does the concept of an "education meta-universe" impact the future of AI-driven language learning?
8. In what ways can AI help improve student engagement and motivation in foreign language learning?
9. How can educators effectively integrate AI into traditional foreign language teaching methods?
10. What are the future trends in AI-assisted foreign language learning, and how should educators prepare for them?

Practical lesson 2. Using Artificial Intelligence in Assessing Writing Skills. Using Artificial Intelligence in Teaching Speaking and Pronunciation Skills.

Lesson Objectives:

- ✓ To introduce teachers to how AI tools can assess writing skills.
- ✓ To explore AI tools for teaching speaking and pronunciation skills.
- ✓ To provide practical experience in using AI technologies for language teaching.
- ✓ To discuss the benefits and challenges of using AI in language assessment and teaching.

Materials Needed:

- ✓ Laptop or tablet with internet access
- ✓ Projector and screen
- ✓ AI tools for writing assessment (e.g., Grammarly, ProWritingAid)
- ✓ AI tools for speaking and pronunciation (e.g., Speechling, Google Speech-to-Text, Pronunciation Power)
- ✓ Audio clips or video clips for speaking exercises.
- ✓ Whiteboard and markers

"What challenges do you face in assessing students' writing skills and teaching pronunciation?"

Task 1. AI in Writing Assessment

Objective: Demonstrate how AI can be used to assess and provide feedback on writing skills.

- **Live Demonstration**:
  - Use an AI writing tool like **Grammarly** or **ProWritingAid** to demonstrate how it can assess writing for grammar, spelling, coherence, and style.
  - Show how teachers can use AI tools to provide immediate feedback to students.
- **Hands-on Practice (10 minutes)**:
  - Teachers will work individually or in pairs to input short writing samples into an AI tool and analyze the feedback.
  - Discuss how the tool can be used in classrooms to assess students' writing progress.

Task 2. AI in Teaching Speaking and Pronunciation)

Objective: Explore how AI can help improve students' speaking and pronunciation skills.

- **Live Demonstration (10 minutes)**:
  - Show AI tools for speaking practice, such as **Speechling** or **Google Speech-to-Text**, to help students practice pronunciation.
  - Highlight how these tools offer immediate feedback on pronunciation accuracy, fluency, and stress patterns.
- **Practical Activity (10 minutes)**:
  - Teachers will practice speaking into the AI tool and receive feedback on their pronunciation.
  - Teachers should pay attention to how the AI tool detects issues like word stress, tone, and clarity.

Task 3. . Designing a Lesson Plan with AI Tools

Objective: Have teachers create a lesson plan incorporating AI tool for writing assessment and speaking practice.

- **Group Activity**:
  - Divide teachers into small groups.
  - Ask each group to design a short lesson plan using AI tool for one of the following:
    - Writing: Assessing a short writing task with AI feedback.
    - Speaking: Using AI tools to improve pronunciation in a speaking exercise.
  - For each lesson plan, teachers should outline:
    - **Learning objectives** (e.g., improving grammar or pronunciation).

        - **AI tool** to be used (e.g., Grammarly for writing, Speechling for speaking).
        - **Activity details** (e.g., writing task, speaking drill).
        - **Assessment** (How will the AI tool be used to assess students' skills?).
- **Group Sharing**:
    - Each group presents their lesson plan to the class, explaining the AI tools chosen and how they plan to use them for assessment and teaching.

Task 4. Benefits and Challenges Discussion

Objective: Reflect on the practical use of AI in writing and speaking instruction.

- **Discussion**:
    - Ask teachers to reflect on the potential **benefits** and **challenges** of using AI tools:
        - **Benefits**: Instant feedback, personalized learning, accessible practice for students, improved accuracy in assessments.
        - **Challenges**: Over-reliance on technology, issues with non-native accents, accessibility concerns, privacy issues.
    - Encourage teachers to share their thoughts and experiences regarding AI's impact on language teaching.

MAVZUNI MUSTAHKAMLASH UCHUN QO‘SHIMCHA MATERIALLAR

Task 1: Creating a Pronunciation Quiz with AI

Objective: Use AI tools to create a quiz that helps students practice and assess their pronunciation.

Steps:

1. Choose an AI tool for pronunciation practice (e.g., **Speechling** or **Google Speech-to-Text**).
2. Design a list of words or sentences that focus on common pronunciation difficulties (e.g., vowel sounds, stress, intonation).
3. Create a quiz where students record themselves saying these words or sentences. The AI tool should provide instant feedback on whether the pronunciation was accurate.
4. Have teachers test the quiz by using the tool themselves and analyzing the feedback it provides.

Follow-up Discussion:

- What are the challenges and benefits of using AI tools for pronunciation practice?
- How can this task be adapted for different proficiency levels?

Task 2: Writing Assessment with AI Feedback

Objective: Use AI tools to assess and provide feedback on writing samples.

Steps:

1. Use an AI writing tool like **Grammarly** or **ProWritingAid** to create a writing task for students (e.g., write a 200-word essay on a specific topic).
2. Input the students’ writing into the AI tool to check for grammar, spelling, coherence, and style issues.

3. Review the AI's feedback and categorize the common errors (e.g., punctuation errors, subject-verb agreement).
4. Discuss how the AI can be used in the classroom to give students quick, actionable feedback and how it helps teachers save time on manual corrections.

Follow-up Discussion:

- How accurate was the AI in identifying errors?
- How can AI feedback be balanced with teacher input for more effective learning?

Task 3: Integrating AI in Listening Comprehension Exercises

Objective: Use AI to enhance listening comprehension exercises.

Steps:

1. Choose an AI tool (e.g., **Speechling** or **FluentU**) that offers interactive listening exercises.
2. Create a listening comprehension activity where students listen to an audio or video clip in the target language.
3. Use the AI tool to analyze students' responses to comprehension questions or their ability to transcribe parts of the audio.
4. Provide immediate feedback to the students based on their performance.

Follow-up Discussion:

- How does the AI tool provide feedback on listening skills?
- How can the AI tool help personalize learning and adapt to students' individual needs?

Task 4: Voice-Activated Vocabulary Drills

Objective: Use speech recognition to help students practice vocabulary and pronunciation.

Steps:

1. Select an AI speech recognition tool (e.g., **Google Speech-to-Text**).
2. Create a list of vocabulary words that students need to practice pronouncing.
3. Set up a practice session where students repeat the words, and the AI tool analyzes their pronunciation.
4. After each attempt, the AI provides feedback on pronunciation accuracy, and students repeat the words until they get a high accuracy score.

Follow-up Discussion:

- How can AI help motivate students to improve their vocabulary retention?
- What other types of drills (e.g., sentence construction, dialogues) could be incorporated into this activity?

Task 5: AI for Personalized Writing Prompts

Objective: Use AI to provide personalized writing prompts based on student proficiency.

Steps:

1. Choose an AI tool (e.g., **Write with Transformer** or **Scribe AI**) that can generate writing prompts.
2. Input the student's proficiency level (e.g., beginner, intermediate, advanced) into the AI tool.
3. The AI will generate customized writing prompts that are appropriate for the student's level.
4. Teachers will review the prompts and have students write short essays based on them, using AI feedback for corrections.

Follow-up Discussion:

- How does AI help tailor lessons to the individual student's needs?
- What are the benefits and drawbacks of AI-generated prompts compared to teacher-generated prompts?

Task 6: Creating an AI-Powered Classroom Assistant

Objective: Use AI as a virtual teaching assistant to enhance student engagement in the classroom.

Steps:

1. Choose a conversational AI tool (e.g., **ChatGPT**, **Dialogflow**).
2. Create a classroom activity where students interact with the AI to practice their speaking skills (e.g., asking the AI questions in English or answering prompts).
3. The AI will respond to students in real-time, providing feedback on their pronunciation, grammar, and sentence structure.
4. Teachers monitor the activity, assisting students with more complex questions if needed.

Follow-up Discussion:

- How can AI increase student participation and confidence in speaking?
- How can teachers ensure the AI tool supports meaningful communication rather than just rote practice?

Task 7: AI for Creating Interactive Reading and Listening Activities

Objective: Use AI to create interactive, multimedia activities that combine reading and listening comprehension.

Steps:

1. Choose an AI-powered platform (e.g., **FluentU** or **Lingvist**).

2. Design an activity where students first read a short passage or article and then listen to an audio or video related to the same content.
3. Students will then complete comprehension questions using AI-generated quizzes.
4. The AI tool will provide feedback on their accuracy, and students can retry parts of the activity for better understanding.

Follow-up Discussion:

- How do AI-generated quizzes improve students' comprehension?
- How can these activities be adapted for different language levels?

Task 8: Designing AI-Enhanced Speaking Practice for Pronunciation Improvement

Objective: Use AI to create a structured pronunciation practice session.

Steps:

1. Use AI tools like **Speechling** or **Pronunciation Power** to create a set of sentences with difficult pronunciation features (e.g., vowel length, stress).
2. Teachers will practice these sentences using the AI tools, which will evaluate the pronunciation in real-time.
3. Teachers can use the feedback to adjust their teaching and provide individual corrective exercises for students.
4. Teachers can create a speaking task for students using the same process, enabling students to assess their own pronunciation progress.

Follow-up Discussion:

- How can AI tools be used to provide individualized feedback on speaking skills?
- What are the benefits of real-time pronunciation feedback for students?

QUESTIONS FOR DISCUSSIONS

1. How can AI improve the way we assess writing skills, and what limitations do you foresee in AI's ability to evaluate writing?
2. What are the potential benefits and challenges of using AI for pronunciation practice in language teaching?
3. How do AI-powered tools (like speech recognition or grammar checkers) compare to traditional methods of teaching writing and speaking?
4. In what ways can AI tools be used to personalize language learning for students with different proficiency levels?
5. How do you think students will respond to using AI in their language learning process? Are there any concerns you have regarding students' reliance on technology?
6. What strategies can teachers use to integrate AI tools into their classroom routines without overwhelming students with technology?
7. How can AI-powered tools help create more engaging and interactive listening comprehension activities for students?
8. Do you think AI will replace human teachers in the future? Why or why not? What role will teachers play in an AI-driven classroom?
9. What ethical concerns arise from using AI in education, especially regarding data privacy, bias, and fairness? How can these concerns be addressed?
10. How do you envision using AI in your own classroom for writing and speaking tasks? What specific tools would you like to try, and what outcomes would you expect?

TESTS

1. Who developed the Turing Test in 1950?
   a) Alan Turing
   b) Marvin Minsky
   c) John McCarthy
   d) Claude Shannon
2. What was the purpose of the Dartmouth Conference in 1956?
   a) It marked the birth of AI as an academic discipline
   b) It introduced the first AI-powered chatbot
   c) It developed the first voice assistant
   d) It launched the first AI-driven language tool
3. What is the primary function of Deepseek?
   a) Simplifying data analysis and quick searches
   b) Acting as a voice assistant
   c) Providing grammar feedback
   d) Automating translations
4. Which AI tool is known for providing writing assistance and grammar feedback?
   a) Grammarly
   b) Replika
   c) Mondly
   d) Duolingo
5. What year did IBM’s Deep Blue defeat Garry Kasparov in chess?
   a) 1997
   b) 1966
   c) 2011
   d) 2022
6. Which AI tool is widely used for conversational practice?
   a) ChatGPT
   b) Newsela
   c) Otter.ai
   d) Say It
7. What was ELIZA's significance in AI history?
   a) It was an early chatbot demonstrating human-computer communication
   b) It was the first machine to beat a human at chess

c) It was a learning machine based on neural networks

d) It was the first AI-powered virtual assistant

8. What does AI provide in education?

a) Personalized learning

b) Emotional intelligence

c) Ethical judgment

d) Traditional classroom teaching

9. Which AI-powered tool is designed specifically for pronunciation improvement?

a) Elsa Speak

b) Duolingo

c) ChatGPT

d) Grammarly

10. What challenge does AI face in language teaching?

a) Lack of emotional intelligence and human judgment

b) Perfect accuracy in translations

c) Complete replacement of teachers

d) Absence of bias in AI models

11. Which AI tool offers AI-driven language learning paths?

a) Duolingo

b) Otter.ai

c) Newsela

d) Replika

12. What is a common ethical concern related to AI in education?

a) Data privacy

b) Increased teacher salaries

c) Faster internet access

d) More students using books

13. What role should teachers play in AI-enhanced learning?

a) Guiding AI integration and maintaining pedagogical oversight

b) Replacing traditional teaching methods entirely

c) Allowing AI to take full control of lessons

d) Eliminating student assessments

14. Which of the following is an AI-powered chatbot for language learning?

a) Replika

b) Grammarly

c) LingQ

d) Newsela

15. What is a limitation of AI in language teaching?

a) AI tools may have translation errors and cultural biases

b) AI tools are always accurate

c) AI completely understands human emotions

d) AI does not require teacher involvement

16. What does AI adapt based on student performance?

a) Learning paths

b) Internet speed

c) Classroom size

d) Teacher salaries

17. What is an AI-powered reading comprehension tool?

a) Newsela

b) Grammarly

c) Replika

d) Mondly

18. What is the primary function of AI in language learning?

a) Enhancing personalized and interactive learning

b) Completely replacing human interaction

c) Eliminating assessments

d) Avoiding grammar corrections

19. What is a significant privacy concern with AI tools in education?

a) AI tools collect user data

b) AI eliminates student feedback

c) AI reduces internet access

d) AI increases textbook usage

20. Why should AI be balanced with traditional teaching methods?

a) AI should assist, not replace, teachers

b) AI should remove teachers from classrooms

c) AI is superior to human teachers in all aspects

d) AI does not need ethical considerations

21. What is one of the main AI technologies used in foreign language teaching?

a) Speech recognition

b) Blockchain

c) Quantum computing

d) Robotics

22. What is the purpose of machine translation in language learning?

a) To help students understand foreign texts

b) To replace human teachers

c) To create new languages

d) To eliminate grammar rules

23. Which company launched the "AI for Social Good" initiative?

a) Google

b) Microsoft

c) Apple

d) Amazon

24. What is an example of AI-driven personalized learning?

a) AI adjusting learning materials based on student performance

b) Students following the same textbook

c) Teachers using a traditional grading system

d) Assigning the same exercises to all students

25. What is one benefit of speech recognition technology?

a) It provides immediate pronunciation feedback

b) It translates spoken words into different languages

c) It replaces grammar exercises

d) It eliminates the need for listening practice

26. Which AI technology helps in error identification in writing?

a) Natural Language Processing (NLP)

b) Virtual Reality

c) Augmented Reality

d) Robotics

27. What is a major limitation of AI in foreign language teaching?

a) It cannot fully replace human teachers

b) It always provides perfect feedback

c) It eliminates language barriers completely

d) It does not require data security

28. What is one challenge of AI-based education tools?

a) Privacy concerns

b) Unlimited access to free education

c) Reduction in student motivation

d) Faster human grading

29. How does chatbot technology assist in language learning?

a) By providing conversational practice

b) By writing essays for students

c) By replacing human interactions entirely

d) By only translating words

30. What is an example of AI enhancing listening comprehension?

a) Speech recognition software identifying mistakes

b) AI translating student homework

c) Using AI to replace human teachers

d) AI creating entire textbooks

31. What is one function of face recognition in language learning?

a) Capturing mouth movements for pronunciation improvement

b) Identifying students for exams

c) Detecting emotions during lessons

d) Tracking attendance automatically

32. What is a disadvantage of AI-based teaching?

a) Lack of humanized teaching approaches

b) The ability to detect all grammatical errors

c) AI completely replacing teachers

d) All AI tools being completely accurate

33. How can AI contribute to contextualized teaching?

a) Simulating real-life scenarios for language practice

b) Providing only written exercises

c) Removing all conversational exercises

d) Teaching grammar without interaction

34. What is one ethical concern in AI-based education?

a) Data privacy and security risks

b) AI never making mistakes

c) AI completely removing the need for teachers

d) AI grading all assignments perfectly

35. What does Natural Language Processing (NLP) do in language learning?

a) Helps analyze and improve written and spoken language

b) Replaces traditional textbooks

c) Eliminates the need for teachers

d) Creates new languages automatically

36. What is a significant trend in the future of AI in foreign language teaching?

a) More personalized and interactive learning

b) AI removing all grammar instruction

c) AI completely replacing traditional classrooms

d) AI translating entire books instantly

37. What is an advantage of AI-based learning platforms?

a) They allow automated learning based on student progress

b) They eliminate the need for teachers

c) They require no internet connection

d) They work without student interaction

38. What is one potential problem of AI in language learning?

a) Over-reliance on AI tools instead of human interaction

b) AI always providing the correct translations

c) AI making students learn faster than normal

d) AI completely eliminating mistakes

39. Why is continuous research on AI in education important?

a) To improve its effectiveness in language learning

b) To remove AI tools from classrooms

c) To eliminate traditional teaching methods

d) To ensure all students follow the same method

40. What is an essential role of teachers in AI-enhanced learning?

a) Guiding AI integration while maintaining human interaction

b) Allowing AI to replace them entirely

c) Avoiding AI use in the classroom

d) Relying only on textbooks and manual grading

GLOSSARY

1. Artificial Intelligence (AI)

A branch of computer science that deals with creating machines capable of performing tasks that would typically require human intelligence, such as problem-solving, learning, and language understanding.

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2. Machine Learning (ML)

A subset of AI that allows systems to learn from data and improve their performance without being explicitly programmed. It includes supervised, unsupervised, and reinforcement learning.

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3. Supervised Learning

A type of machine learning where the model is trained on labeled data (inputs paired with correct outputs) to make predictions or classifications.

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4. Unsupervised Learning

A type of machine learning where the model learns patterns and structures from unlabeled data, typically used for clustering or anomaly detection.

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5. Reinforcement Learning

A type of machine learning where an agent learns to make decisions by performing actions in an environment and receiving feedback in the form of rewards or penalties.

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6. Deep Learning

A subset of machine learning involving neural networks with many layers that are used to model complex patterns and representations in large datasets, especially for tasks like image and speech recognition.

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7. Neural Networks

Computational models inspired by the structure of the human brain, composed of layers of interconnected nodes (neurons) that process data in parallel to perform tasks such as classification or prediction.

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8. Natural Language Processing (NLP)

A field of AI focused on enabling machines to understand, interpret, and generate human language. It is used in tasks like translation, sentiment analysis, and speech recognition.

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9. Speech Recognition

A technology that enables computers to identify and process human speech, converting spoken words into written text or providing feedback on pronunciation.

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10. Chatbots

AI-powered conversational agents that simulate human conversation through text or voice, often used in customer service, language practice, and education.

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11. Computer Vision

A field of AI focused on enabling computers to interpret and understand visual information from the world, such as identifying objects in images or videos.

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12. Image Recognition

A technology within computer vision that enables AI to identify objects, people, or scenes in images and classify them based on learned patterns.

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13. Generative AI

A type of AI that can generate new content (such as text, images, or music) by learning from existing data. Examples include language models like GPT and tools like DALL·E for image generation.

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14. AI in Education

The use of AI technologies to enhance and support the learning process, including tools for personalized learning, language assessment, and automating administrative tasks.

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15. Writing Assessment

The process of evaluating written language based on criteria such as grammar, coherence, style, and vocabulary. AI tools are often used to provide feedback on these aspects.

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16. Pronunciation Practice

The practice of improving the accuracy of spoken language, focusing on aspects like stress, intonation, and articulation. AI tools can analyze and give feedback on students' pronunciation.

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17. Learning Analytics

The collection and analysis of data from learners' interactions with educational content, used to inform teaching strategies, track progress, and improve student outcomes.

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18. Personalized Learning

An educational approach where the learning experience is tailored to the individual needs, strengths, and preferences of each student. AI can help create adaptive learning paths.

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19. Ethics in AI

The branch of ethics that deals with the responsible use of AI technologies, including concerns about bias, transparency, accountability, and fairness in AI decision-making.

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20. Data Privacy

The practice of protecting personal information from unauthorized access or misuse, especially in the context of AI applications where large amounts of personal data may be used.

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