



AI 코딩 활용 영어수업 과제 만들기

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https://github.com/junkyuHufs/HUFS_workshop



AIDT(?)

- 2024년 교육부 주요정책 및 추진사항
- AI 교수·학습 역량 강화
- <https://www.moe.go.kr/board/Cnts/fileDown.do?m=010503&s=moe&fileSeq=9a3035441f23632c0908dc48712a01af>





Digitizing English classroom

- Beyond classic English classrooms
- AI/Digital literacy

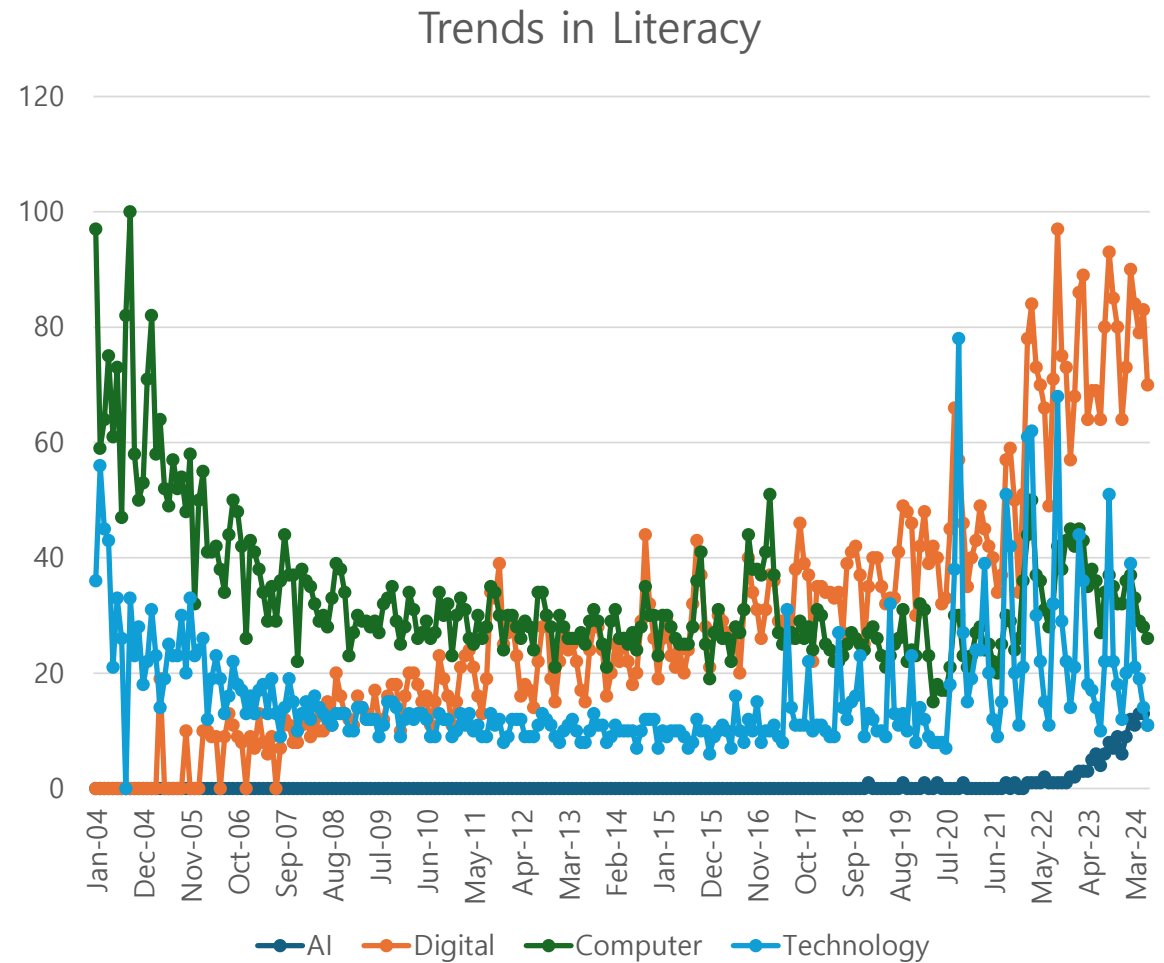


Digital literacy

(GPT 가라사대...)

- **Digital literacy:** the ability to use technology effectively for finding, evaluating, creating, and communicating information.
- **Skills Involved:**
 - **Technical skills** (using devices, software, and tools).
 - **Cognitive skills** (critical thinking, evaluating online information).
 - **Responsible online behavior** (privacy, security, ethics).
- **Importance:** Essential for education, employment, and active participation in today's digital world.
- **Digital Divide:** Addressing skill gaps to ensure equal access and opportunity.

Trends in Literacy (2004-2024)



Balancing AI with human teaching

- Requirements as an English teacher ...
 - **Professional knowledge of English Education**
 - **AI/Digital literacy (for teaching)**



How many terminology do you know?

- ChatGPT
- Python
- Google colab
- Jupyter notebook
- GitHub
- Gradio
- Huggingface
- Deployment
- User interface



ChatGPT in my teaching? (1)



Content Creation:

Lesson Plans; Exercises and Quizzes



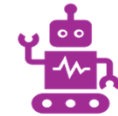
Writing Assistance:

Writing Prompts; Essay Feedback



Reading Comprehension:

Text Summarization; Question Generation



Interactive Learning:

Chatbots: Implement AI chatbots for conversational practice, allowing students to practice English in a simulated environment.

Interactive Stories: Develop interactive stories where students can make choices and see different outcomes.

ChatGPT in my teaching? (2)

Language Practice: Grammar and Vocabulary; Pronunciation Practice

Personalized Learning: Tailored Content; Adaptive Learning (adjust the difficulty of tasks based on student performance).

Classroom Management: Automated Grading; Attendance and Participation: Track attendance and participation using AI tools.

Professional Development: Resource Compilation; Lesson Improvement

ChatGPT during my whole 50-minute class(?)

**Engagement:**

Reduced interaction and passive learning.



Feedback: Lacks detailed, personalized feedback and emotional understanding.

**Skill Development:**

Less practice in critical thinking, writing, and communication.



Quality: Possible errors and lack of deep, contextual content.



Motivation: AI may not effectively inspire or connect with students.



Ethics: Issues with equity and data privacy.



Adaptability: Inflexible to individual needs and spontaneous changes.



Teacher Role: Lacks professional judgment and effective classroom management.

Practical limitations of ChatGPT

사용 횟수 제한

시간 제한

요금제

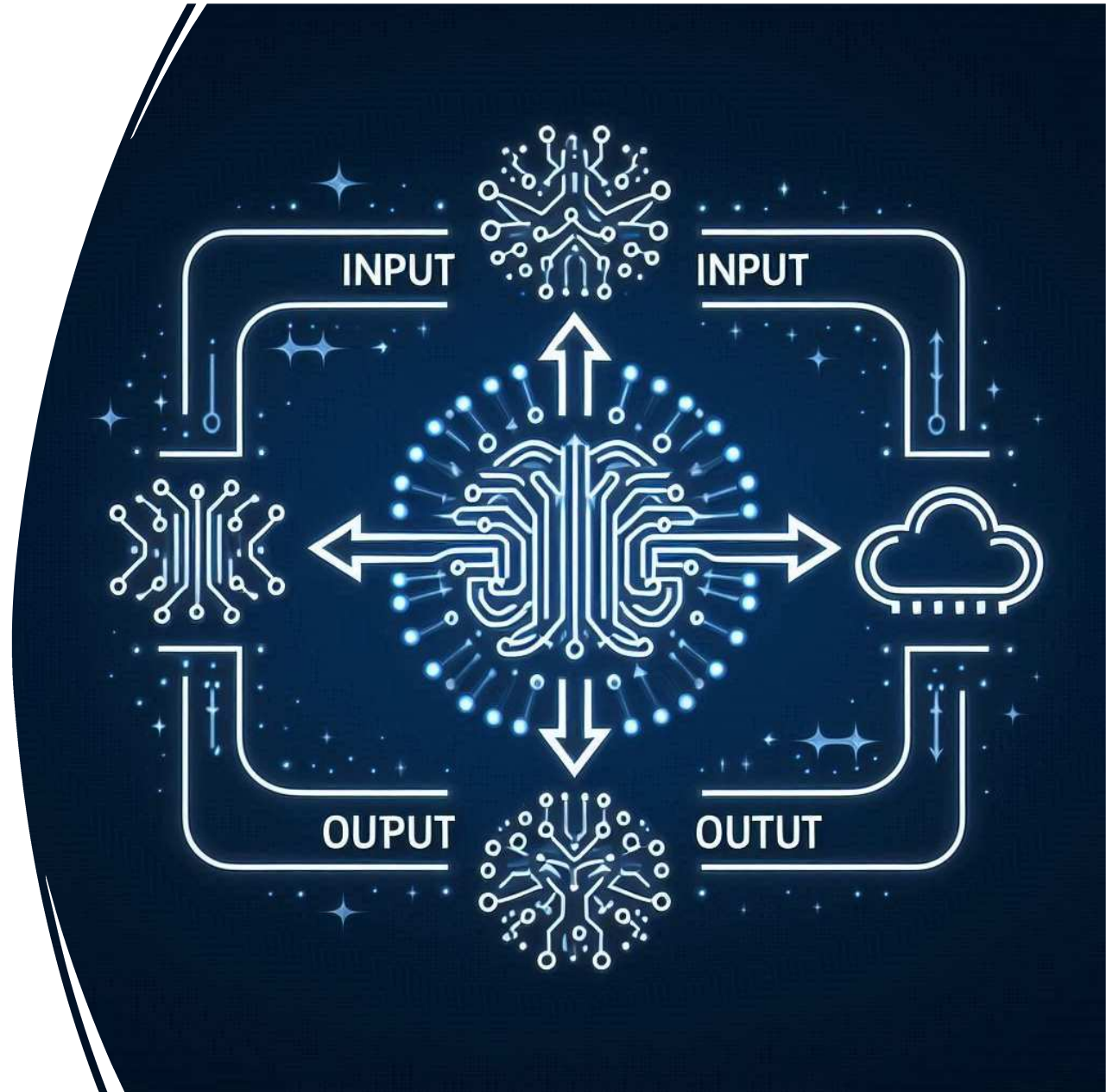
성능 및 응답 시간 지연

How does AI/coding work?

Input (data)

-> **[AI = Function]**

-> output (data)



Multimodality

- Types of data
 - Text
 - Sound
 - Image (video)
- LM
- TTS, STT
- Text-to-image/Image-to-text





What can we do for now?

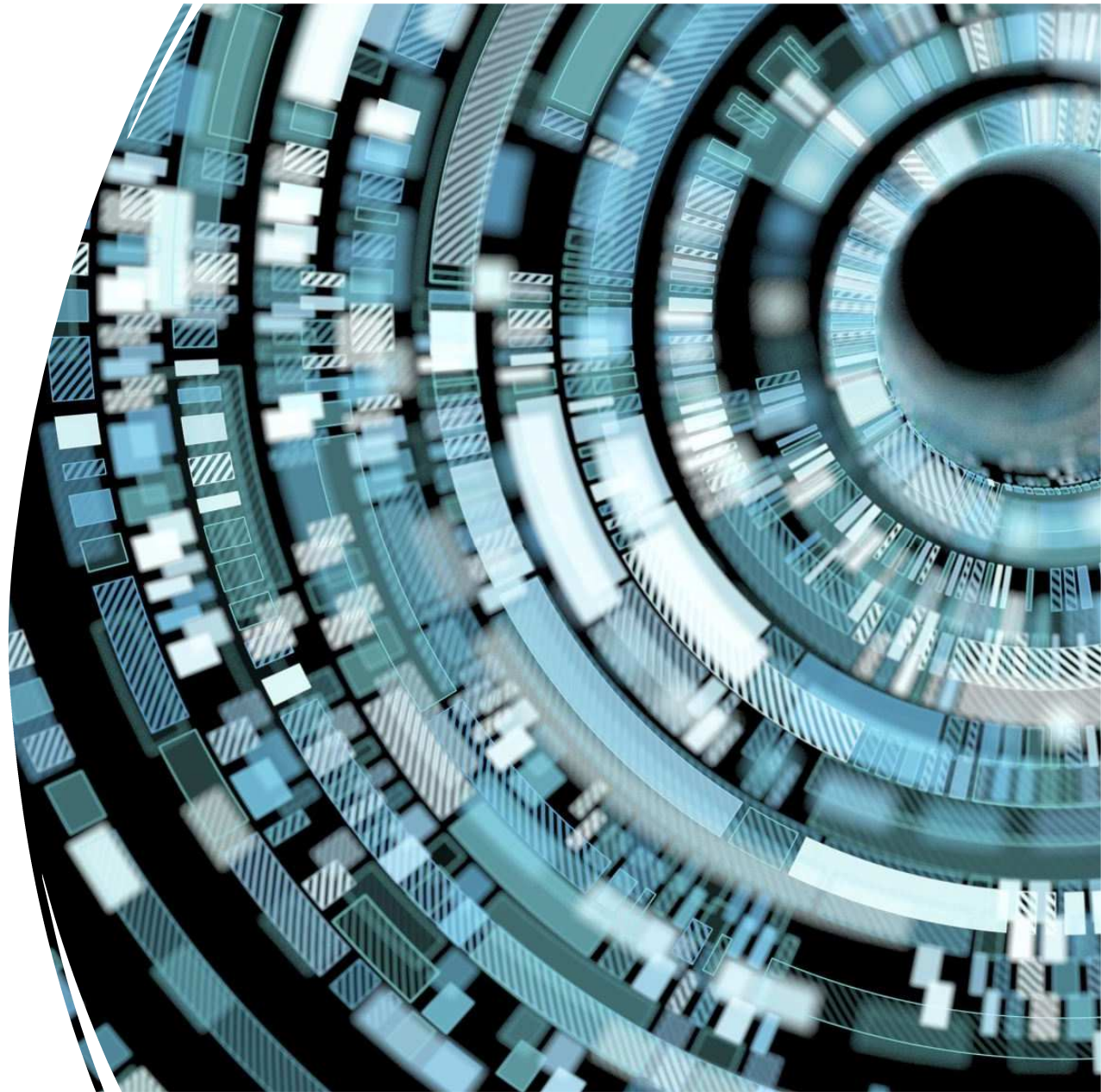
- Integrate some technology outcomes into your teaching practice
- An example
- <https://ejun123-readaloud.hf.space/>

What happened in terms of Digital Literacy?

	Tasks	Methods	Required literacy
Step 1	Text generation	ChatGPT (AI)	Prompt
Step 2	App implementation	Python coding	Coding

What matters in generative AIs?

- Think about how GPT starts.
 - By entering input (prompt); typically, natural language
 - So, handy!!!
 - **No coding to use ChatGPT!!!**
- **Prompt engineering/ Prompt literacy**
- <https://github.com/snwfdhmp/awesome-gpt-prompt-engineering>
- Again, to make the prompts work well, **professional domain-specific knowledge (i.e., English education)** is important!!



For implementation: Coding? Computer programming?

- Didn't you say no coding to use such a powerful tool as ChatGPT?
- And I am an English teacher and don't want to spend my precious time on learning coding 😊



Coding? I want to use other pre-made AIs

- 광고/비용
- 너무 많은 생성형 AI tools
- Difficult to get your right choice (e.g., Gamma)
- Think about Corpus Analysis tools
- <https://corpus-analysis.com/>
 - A hopefully comprehensive list of currently **280 tools** used in corpus compilation and analysis.



Wait! Learning a programming language can benefit English teachers in several key ways:

Enhanced Teaching Methods

Cross-Disciplinary Skills

Innovative Classroom Activities

Efficient Classroom Management

Professional Development

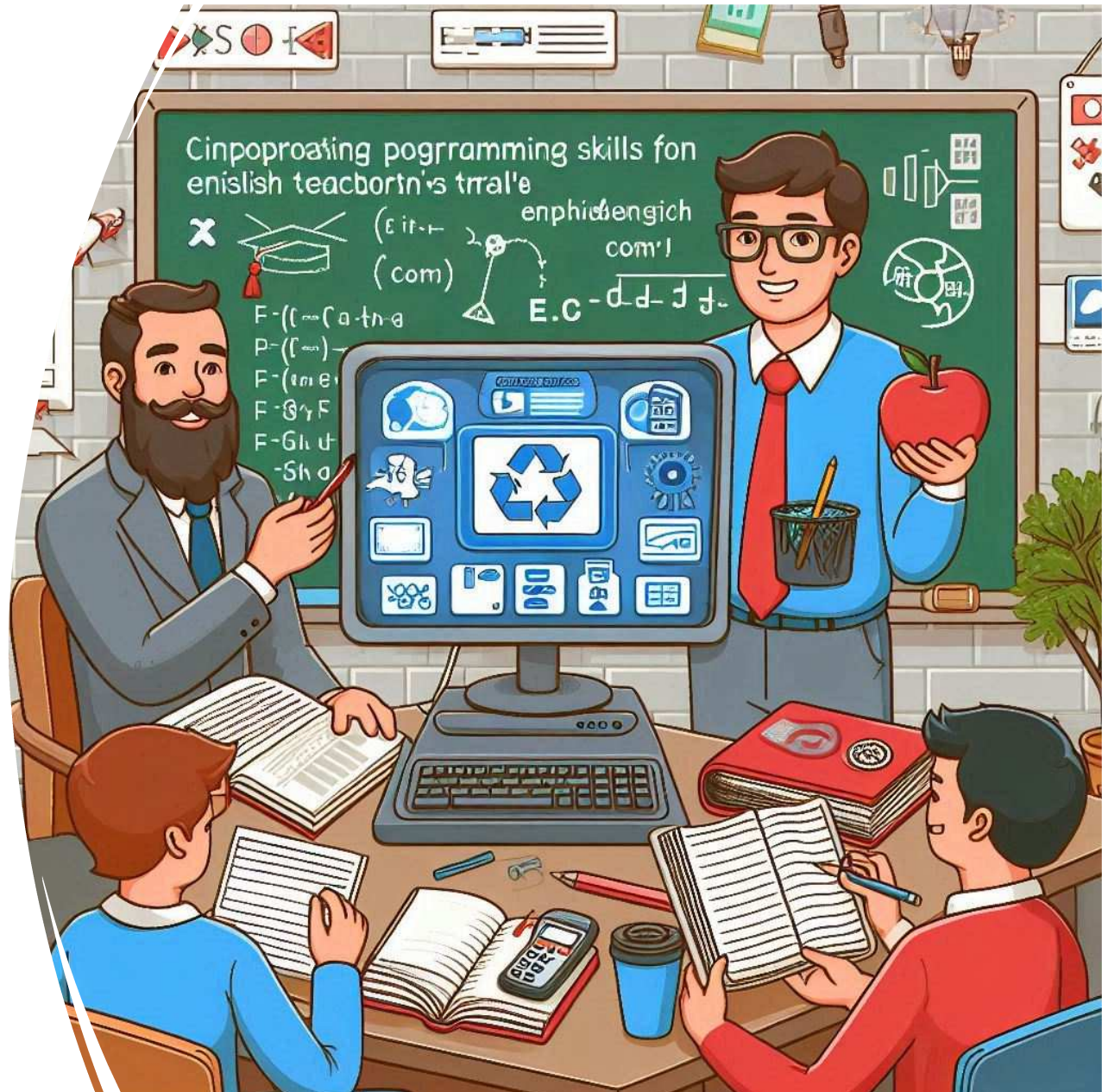
Empowering Students

Access to Resources

Support Diverse Learning Needs

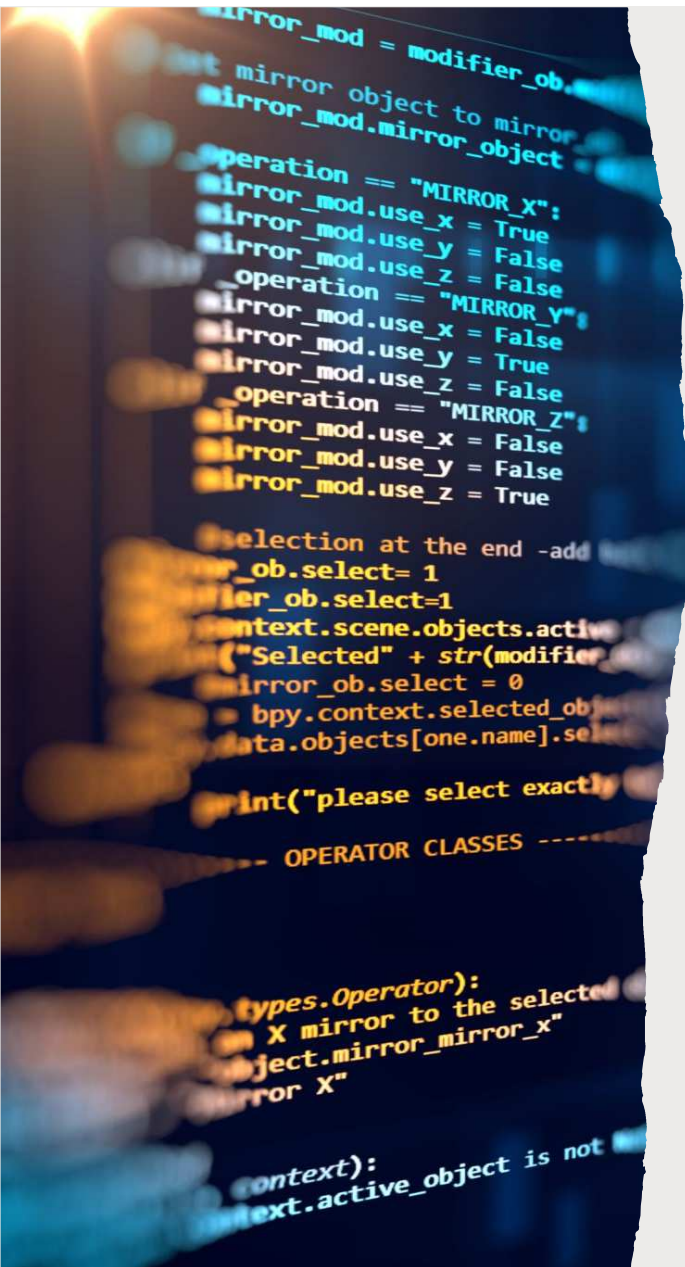
Coding for English teachers

- Incorporating programming skills can significantly enhance an English teacher's toolkit, making their teaching more dynamic, relevant, and effective in the digital age.

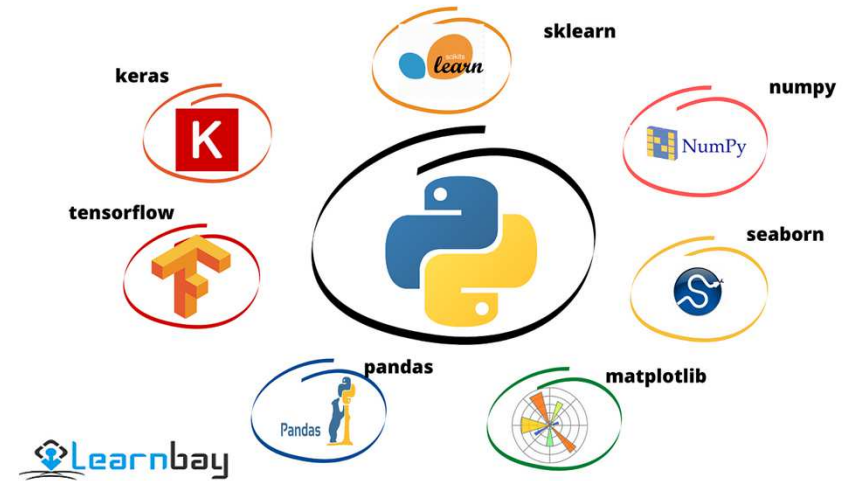


Ok, Coding, but I am scary.

- Even professional programmers do not know everything of programming languages such as Python
- Computer science evolves so rapidly
- Sign up for coding Bootcamp?
- We have ChatGPT and other generative AIs.
- Don't need to code from a scratch.
- Basic knowledge of Python/math will suffice to start for English teachers



Python coding



Python to UI and web

Gradio:

- A Python library that simplifies building interactive user interfaces (UIs)



Huggingface space:

- 사용자가 머신 러닝 애플리케이션을 쉽게 배포하고 공유할 수 있는 공간



HUGGING FACE



Coding procedures

Input -> Function -> output

Typical steps

- 1. Library/Package 불러오기 (Function만들기 도구)
- 2. Input data 불러오기
- 3. Function 만들기
- 4. 결과 확인

Python 용어 for GPT 사용

$$Y = f(x)$$

- f : 함수, 기능, 메소드
- x : 매개변수, 파라미터, 인자/인수(argument)
- Y : 결과값, 반환값, 리턴값

예시

- `print(), type()`

Python: $Y=f(x)$

```
print("Hello, World!")
```

```
# 사용자로부터 두 숫자를 입력받기
num1 = input("첫 번째 숫자를 입력하세요: ")
num2 = input("두 번째 숫자를 입력하세요: ")

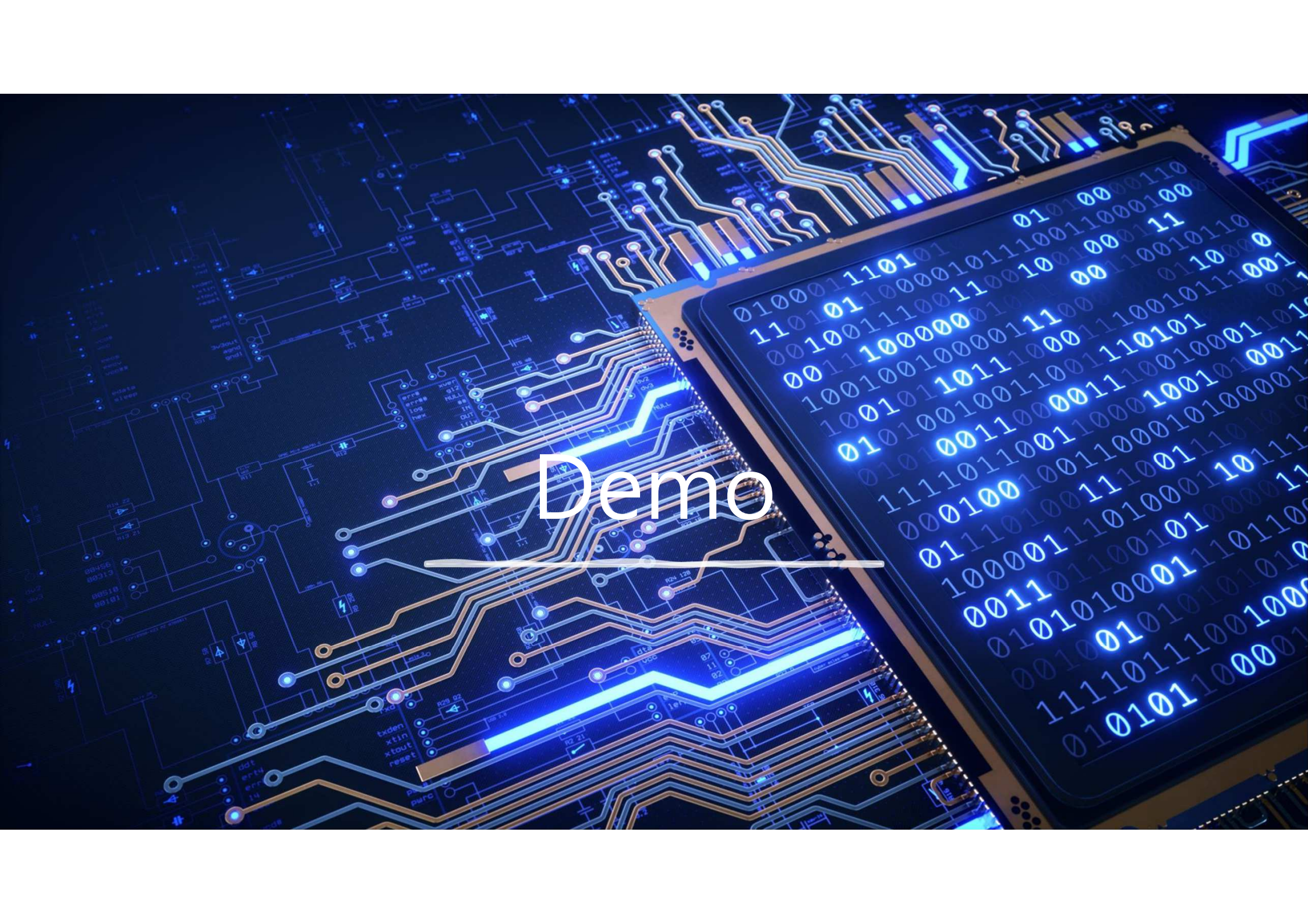
# 입력받은 문자열을 정수로 변환하기
num1 = int(num1)
num2 = int(num2)

# 두 숫자의 합을 계산하여 출력하기
sum = num1 + num2
print("두 숫자의 합은:", sum)
```

```
import math

# 숫자의 제곱근 구하기
number = 16

sqrt = math.sqrt(number)
print(f"{number}의 제곱근은 {sqrt}입니다.")
```

Demo

화면 전체를 캡처합니다. (Ctrl+Shift+A)

App Journey



WordCloud



TTS
Listening



Listening
Cloze
Activity



Image
Sequencing
Activity



Writing
Checker

Demo