Promoting Blended Learning Strategies Using a Generative AI Platform

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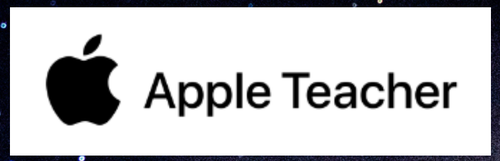
About Me

- Head of Technology Enhanced Learning Team
- Director of STEM & Innovation Centre
- Mathematics, M2, ICT Teacher
- Apple Teacher
- Google Certified Educator
- Edpuzzle Coach
- Quizizz Game Changer



Our School

- Established in 1978
- Sha Tin District
- EMI, Co-educational
- Strive to foster students' all-round development
- Nurture students into future leaders with a global perspective
- Students have excellent learning attitudes and brilliant academic achievements

Current Situation

Overview

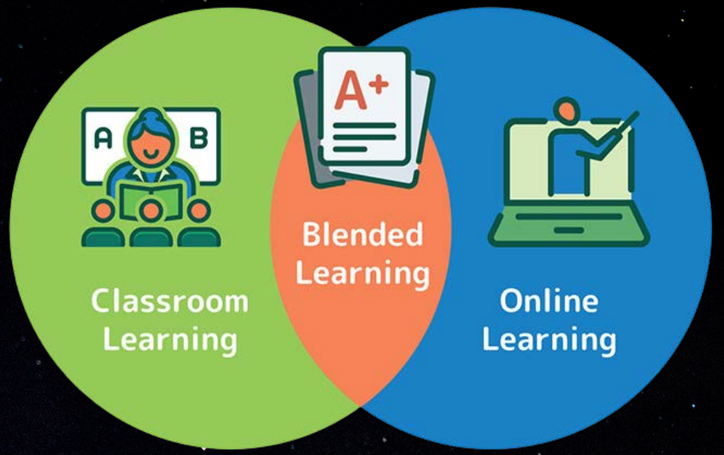
01 Blended learning

02 Generative AI

03 Platforms

Blended Learning

Blended learning

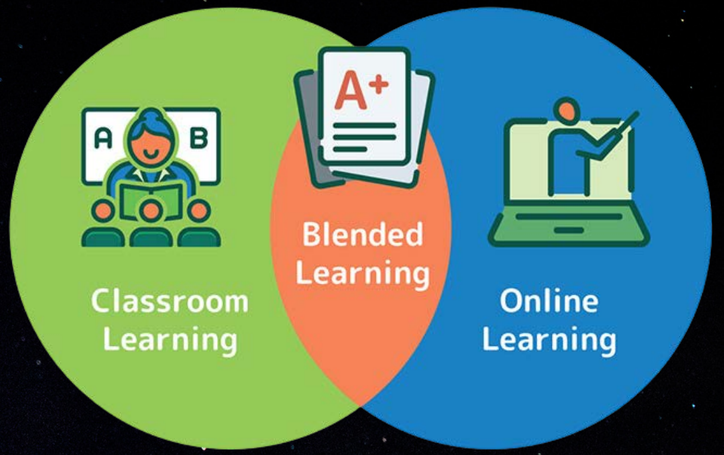


- Combining instructional modalities
- Combining instructional methods
- Combining face-to-face and online learning

Reference: Graham, C. R. (2006). Blended learning systems. The handbook of blended learning: Global perspectives, local designs, 1, 3-21.

Blended learning

- Improved Pedagogy
- Increased access/flexibility
- Increased Cost Effectiveness



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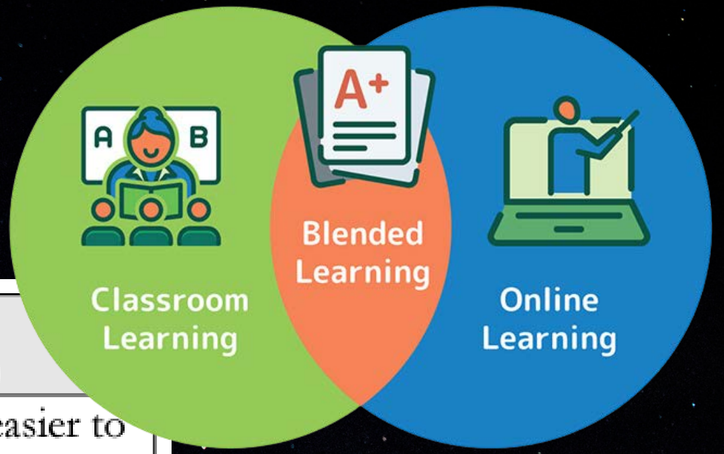
Blended learning

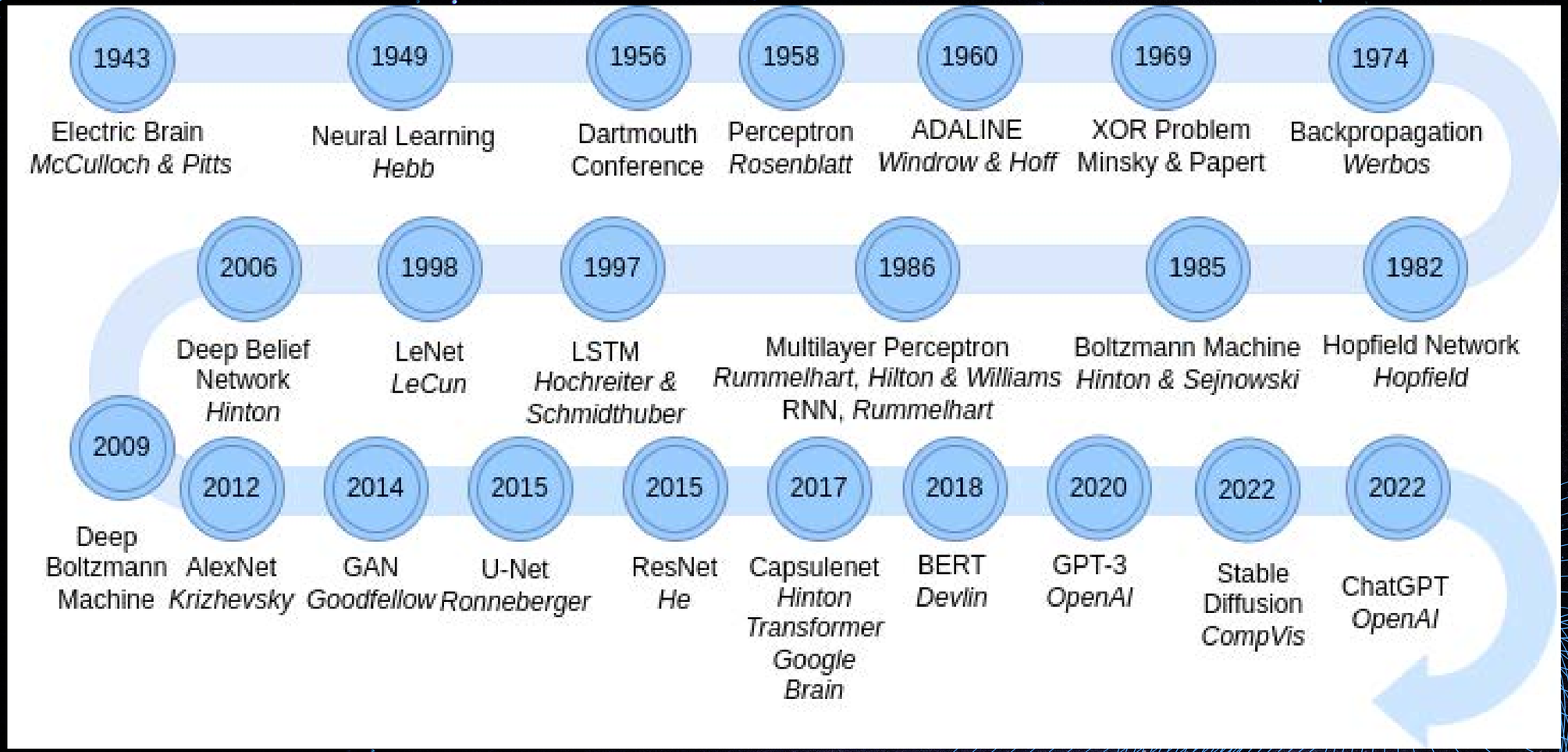


	Computer-mediated environment (Asynchronous text-based discussion)	F2F environment (In-class discussion)
Strengths	***Flexibility:*** Students can contribute to the discussion at the time and place that is most convenient to them. ***Participation:*** 100% students can participate because time and place constraints are removed. ***Depth of Reflection:*** Learners have time to more carefully consider and provide evidence for their claims and provide deeper more thoughtful reflections. (Mikulecky, 1998; Benbunan-Fich & Hiltz, 1999)	***Human Connection:*** it is easier to bond and develop a social presence in a F2F environment. This makes it easier to develop trust etc. ***Spontaneity:*** Allows for the generation of rapid chains of associated ideas and serendipitous discoveries (Mikulecky, 1998).

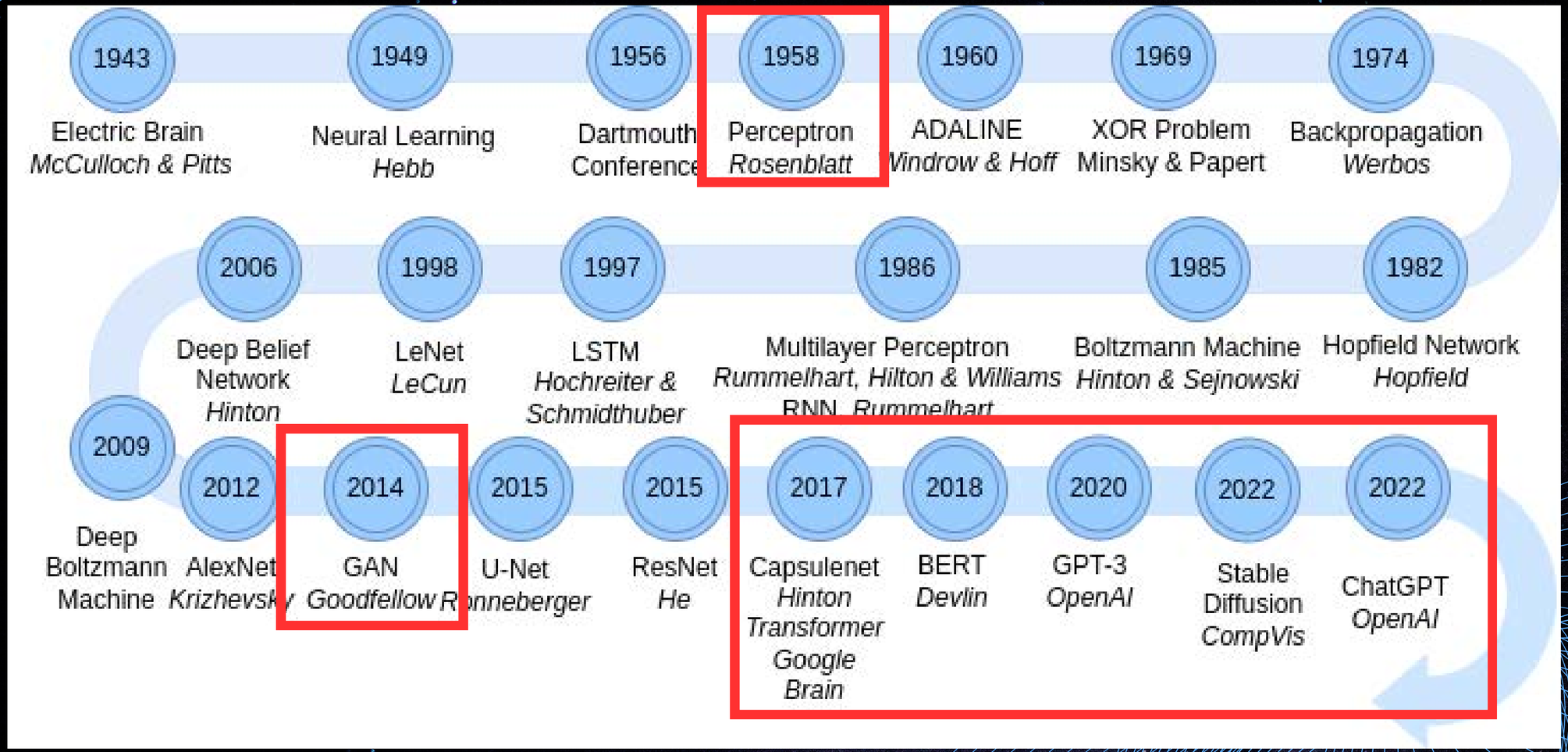
Reference: Graham, C. R. (2006). Blended learning systems. The handbook of blended learning: Global perspectives, local designs, 1, 3-21.

Generative AI

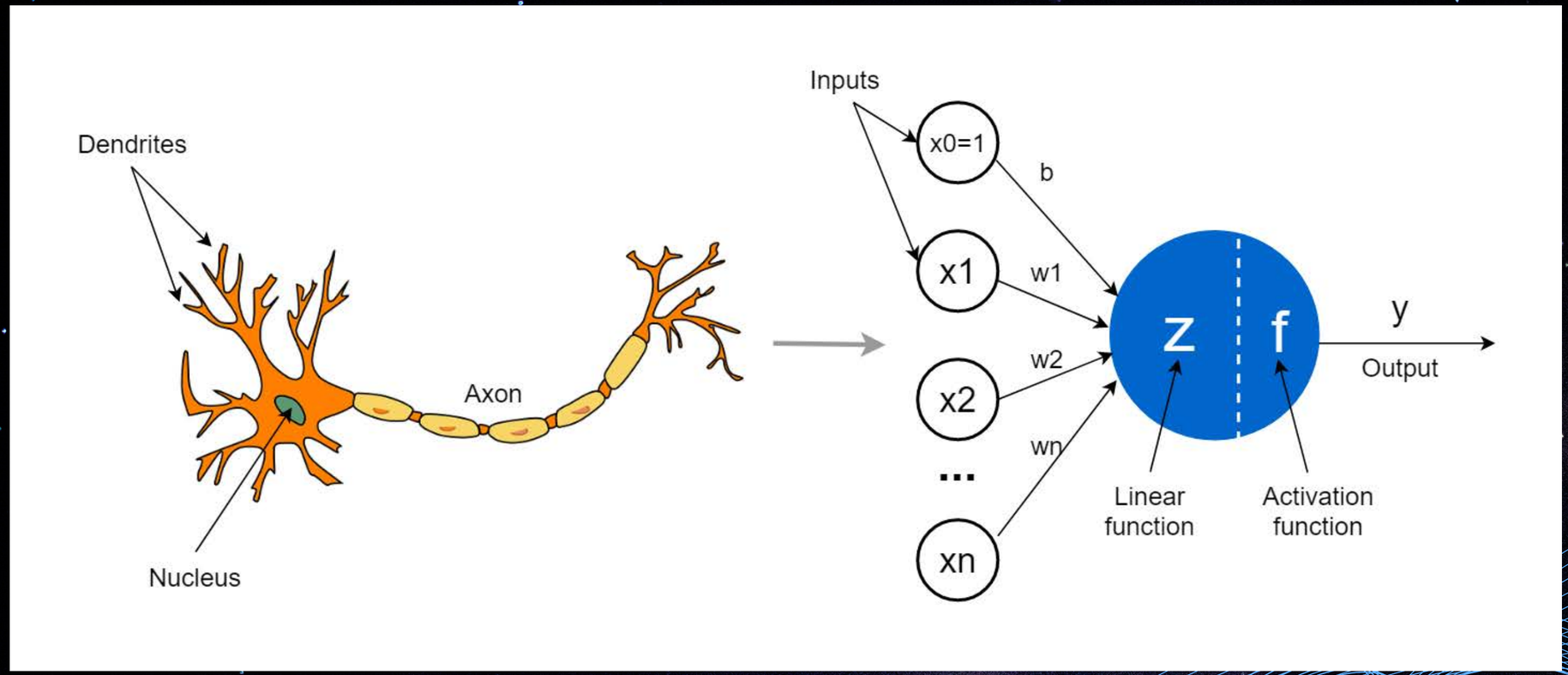
Roadmap of Generative AI



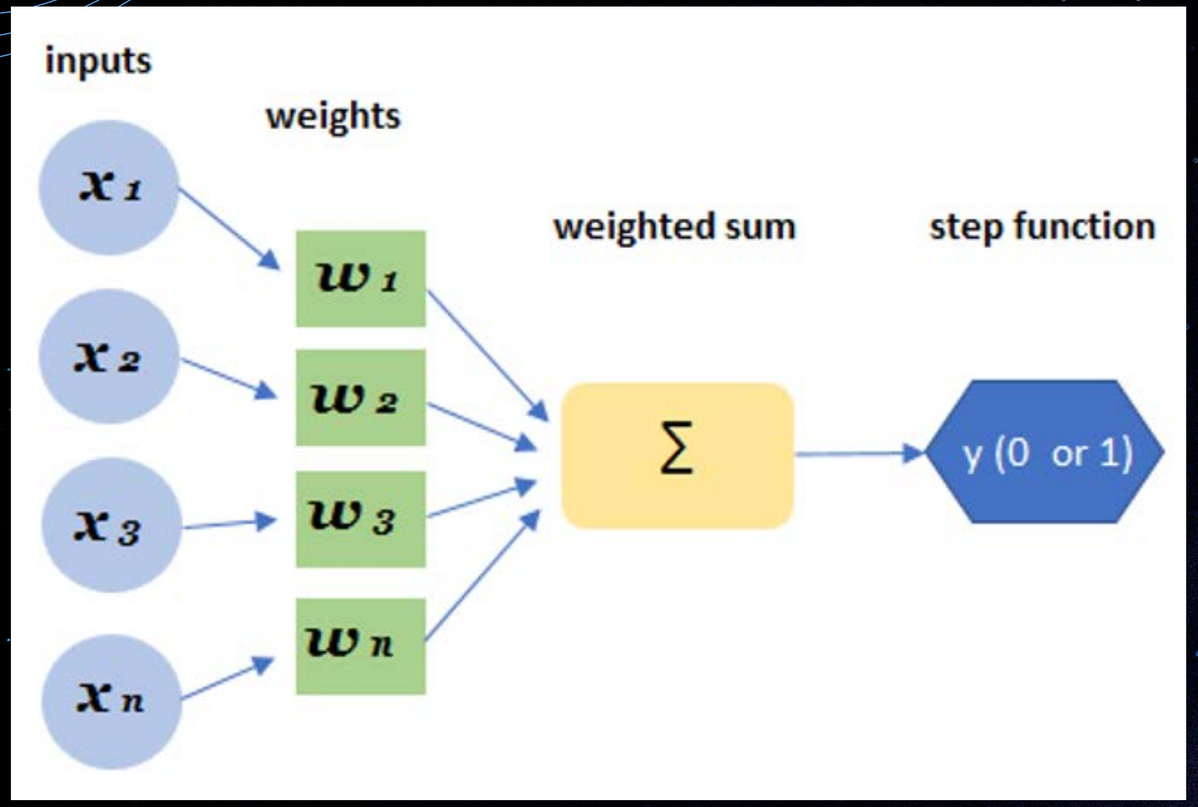
Roadmap of Generative AI

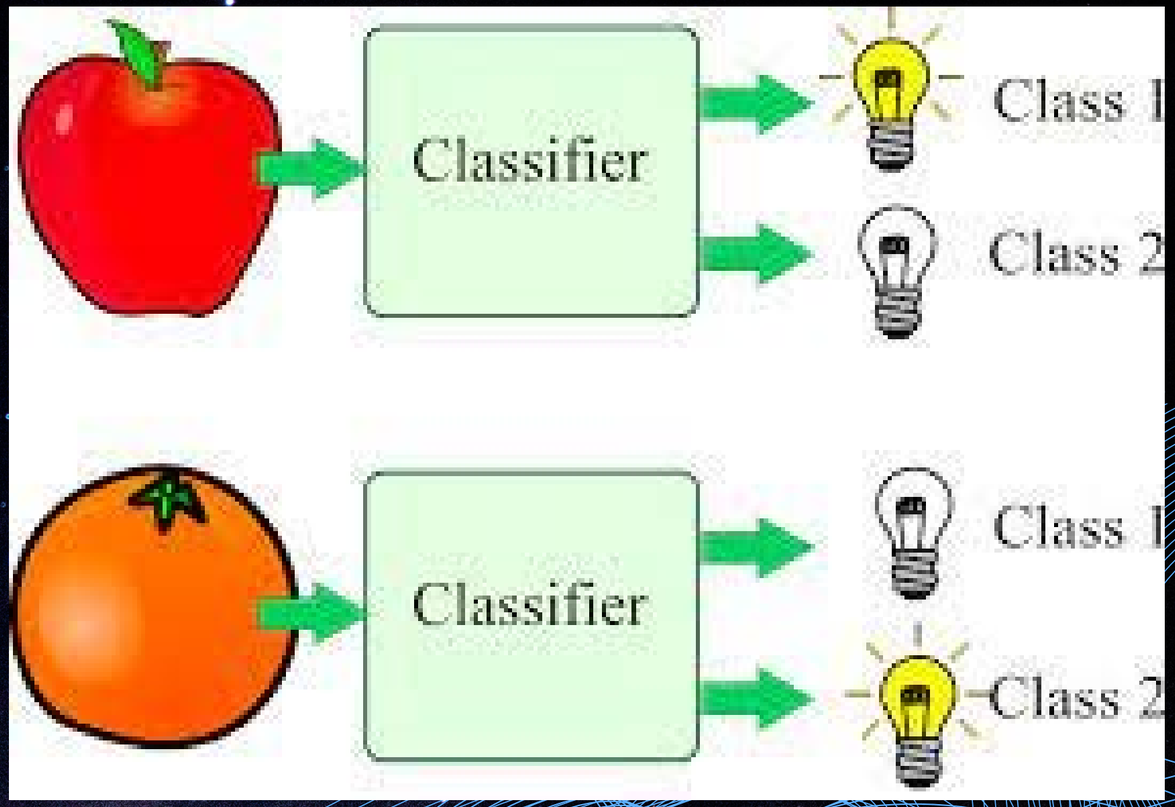


Perceptron (1958)



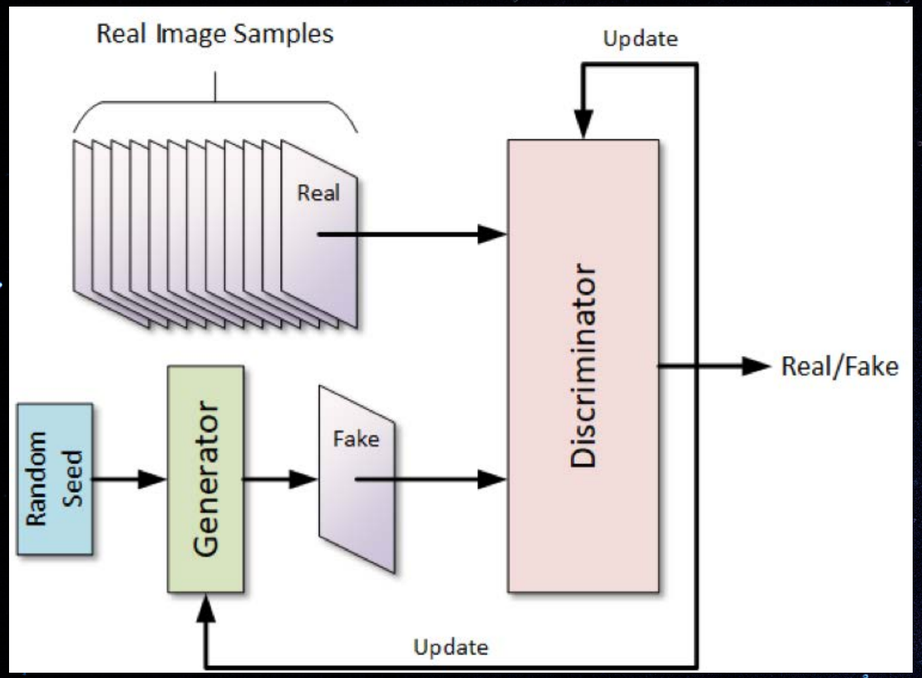
Perceptron (1958)

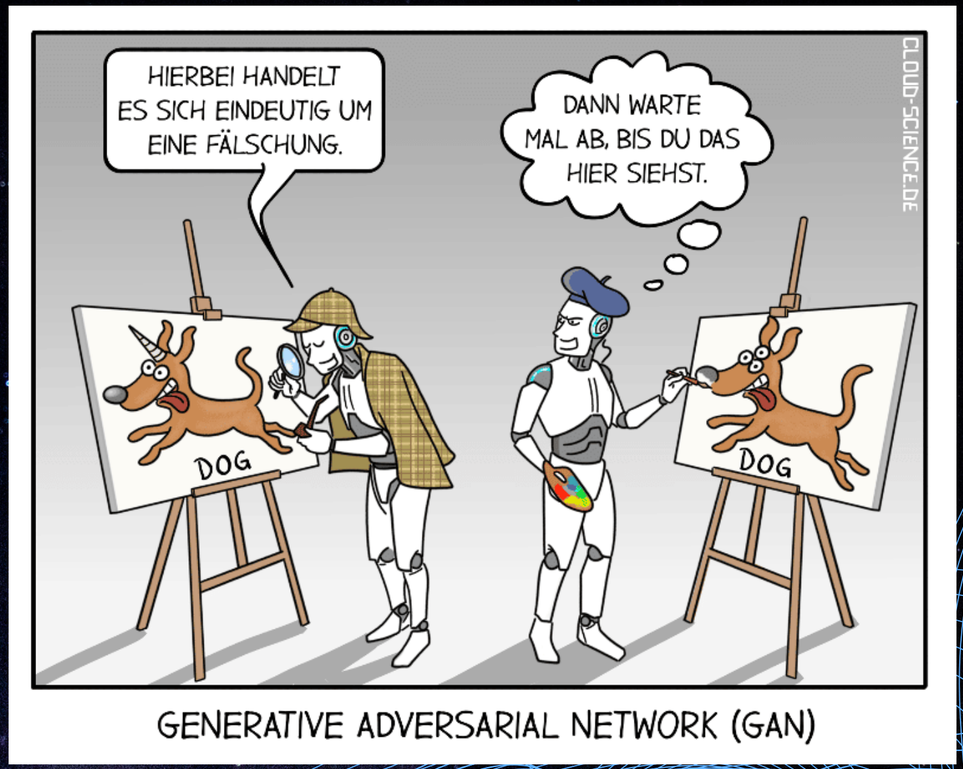




Generative Adversarial Network (GAN) (2014)

- Generator & Discriminator

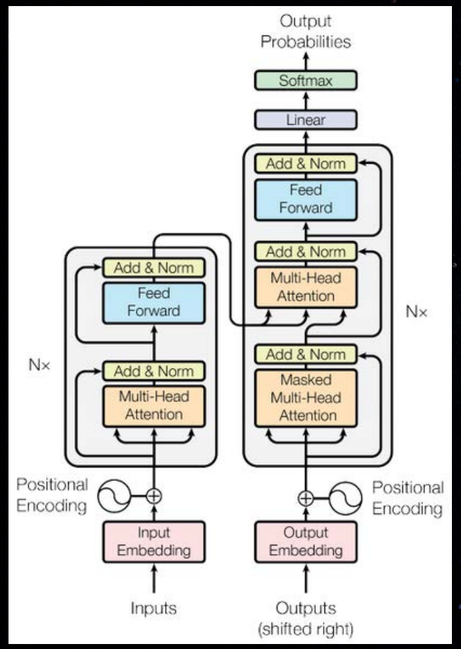




Reference: Mirza, M., & Osindero, S. (2014). Conditional generative adversarial nets. arXiv preprint arXiv:1411.1784.

ChatGPT (2022)

- Generative
- Pre-trained
- Transformer



ChatGPT Poe

Certainly! Here's a concise list of functions for ChatGPT:

1. Language processing
2. Conversation generation
3. Question-answering
4. Knowledge retrieval
5. Text completion
6. Natural language understanding
7. Language translation
8. Sentiment analysis
9. Summarization
10. Recommendation systems

These functions cover the main capabilities of ChatGPT in understanding and generating human-like text, facilitating conversations, providing answers, retrieving information, and performing various language-related tasks.

SWOT Analysis of AI Tools

Strengths

- Accelerate tool development
- Boost planner productivity
- Generalizes across tasks
- Expands on ideas/narratives
- Research assistance
- Rapid draft visualizations
- Advanced editing
- Scale analysis from few examples
- Document search & synthesis

Weaknesses

- Encoded bias & framing problems
- Unpredictable & incorrect outputs
- Undecided legality (Copyright)
- Privacy (model leaks, training)
- Ethics of authorship
- Misinformation risk
- Black-box complexity
- Exploitation in AI research
- Environmental footprint of models
- Limited access beyond research organizations

Opportunities

- Models tuned to planning needs
- Opensource & affordable models
- Scenario ideation & generation
- Synthesize public feedback
- Rapid proposal rendering
- AI design evaluation
- Interactive community engagement tools
- Fuse data of today (existing conditions) with data of tomorrow (policy/codes)

Threats

- Skill atrophy risk
- Insufficient regulation
- Unaccountable process risk
- Magnify power asymmetries
- Labor market disruption
- Exacerbated inequities
- Cybersecurity, mass misinformation campaigns
- Value-lock (static data vs. social change)

Reference: David, W. (2023, May 9). Augmented: Planners in an Era of Generative AI. American Planning Association. https://www.planning.org/blog/9269515/augmented-planners-in-an-era-of-generative-ai/

Platforms

Generative AI Powered Platforms

NOLEJ AI

A transformative platform that turns videos into interactive content, including interactive videos, quizzes, games, and flashcards.

Padlet (Magic Padlet)

A collaborative platform that empowers teachers to share posts and facilitates seamless online collaboration and interaction among students.

Edpuzzle (Teacher Assist)

A web-based eLearning platform that provides video upload and customization features, along with the flexibility to select videos from YouTube.

Quizizz (QuizAI, LessonAI)

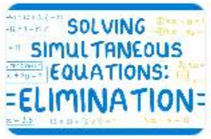
A quiz building platform that sparks deeper student engagement through its interactive elements and thoughtfully crafted design.

NOLEJ AI

A transformative platform that turns videos into interactive content, such as interactive videos, quizzes, games, and flashcards.

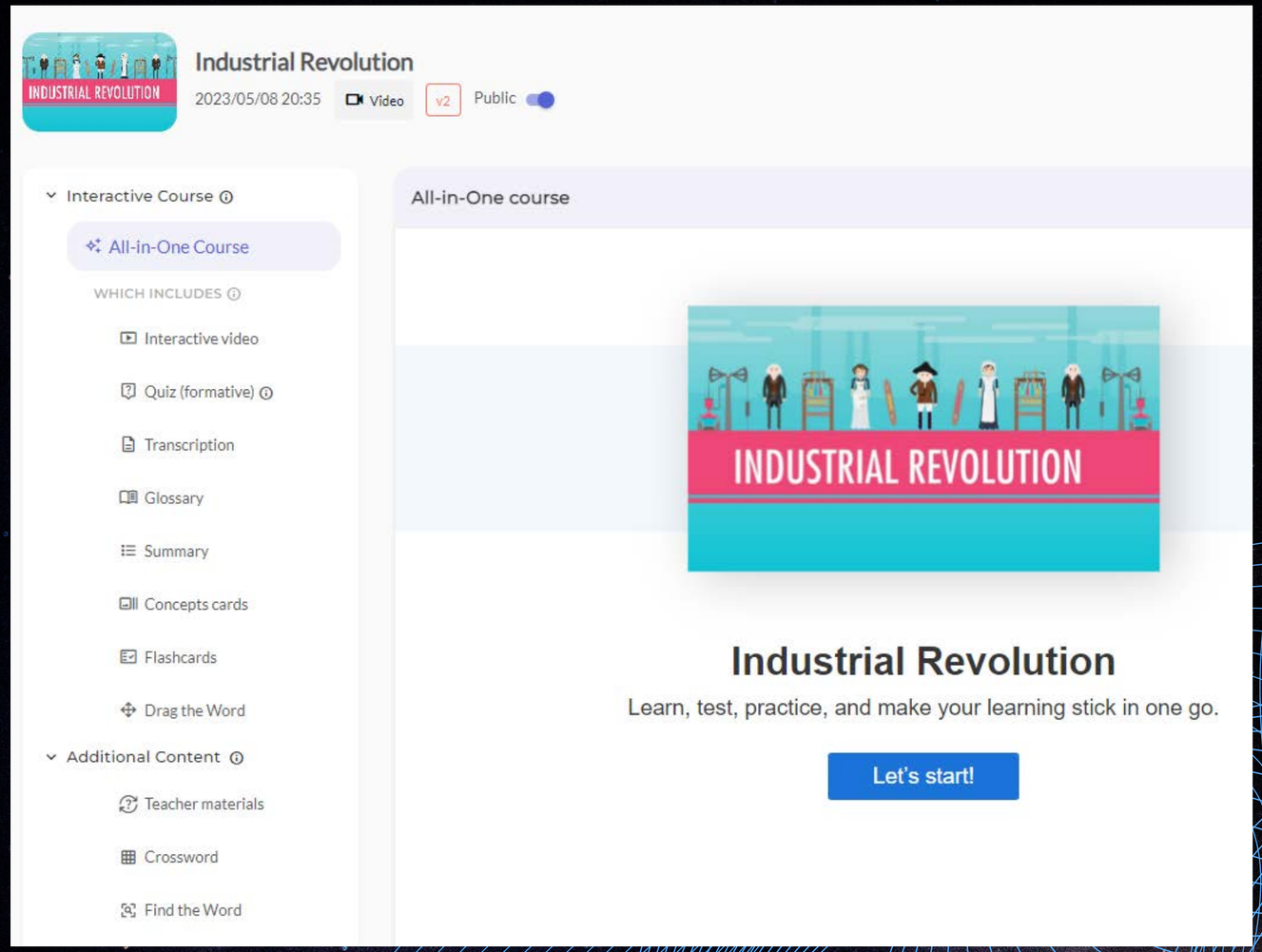
NOLEJ AI

- **Interactive Course**

Module	Type	Status	Date
 Industrial Revolution Public v2	Video	Ready	2023/05/08 20:35
 Simultaneous Equations Public v2	Video	Ready	2023/05/09 16:56
 Output Devices Public v2	Video	Ready	2023/05/08 19:46

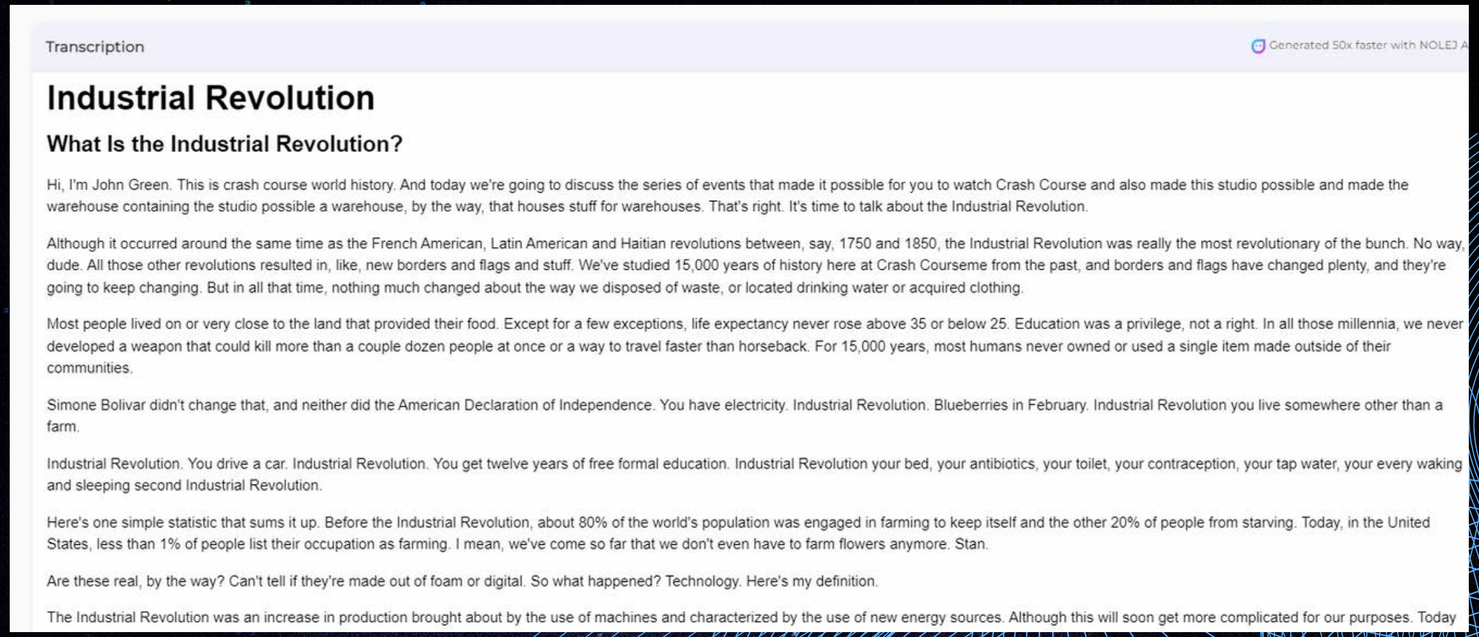
NOLEJ AI

- Interactive Course



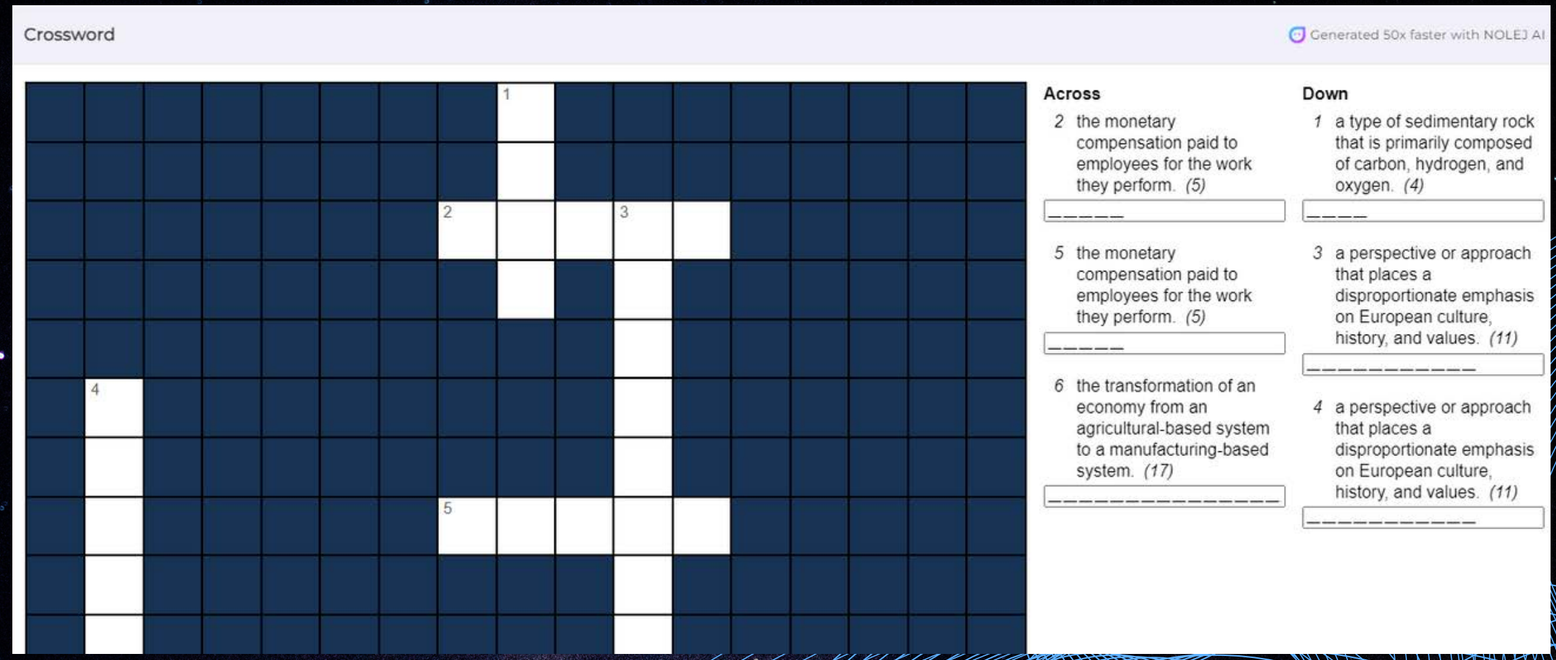
NOLEJ AI

- Interactive Course
  - Transcription



NOLEJ AI

- Interactive Course
  - Transcription
  - Crossword



Crossword

Generated 50x faster with NOLEJ AI

Across

2 the monetary compensation paid to employees for the work they perform. *(5)*
_____

5 the monetary compensation paid to employees for the work they perform. *(5)*
_____

6 the transformation of an economy from an agricultural-based system to a manufacturing-based system. *(17)*
_____

Down

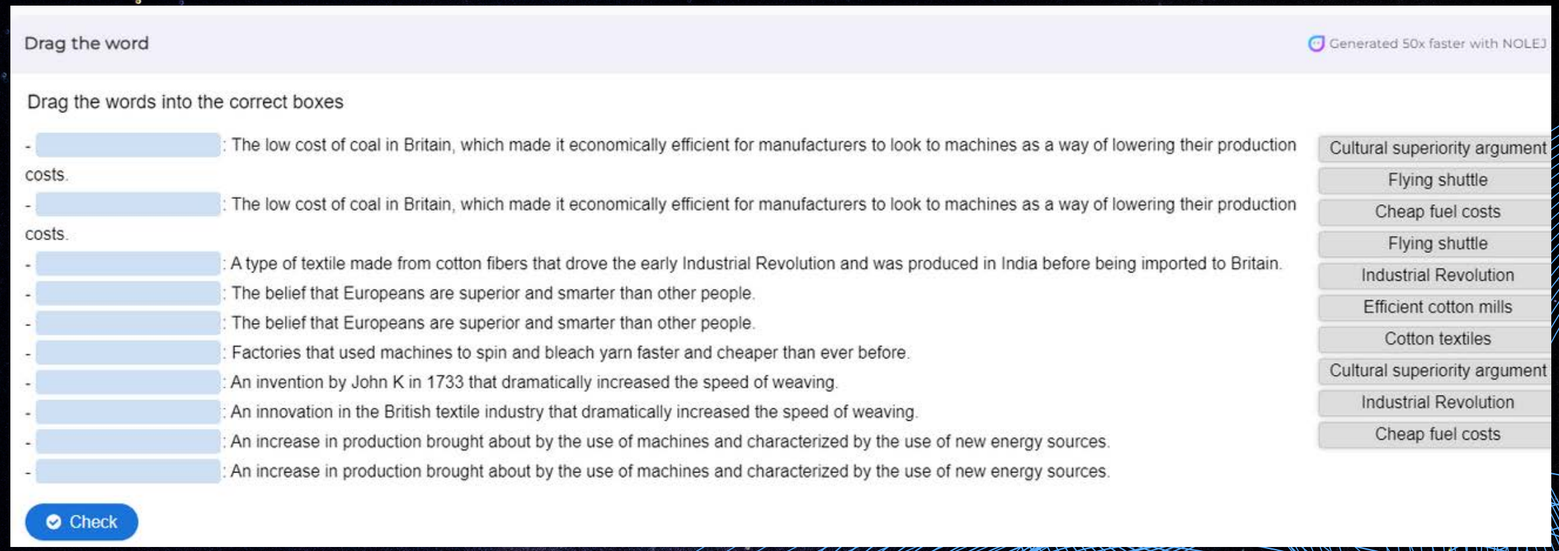
1 a type of sedimentary rock that is primarily composed of carbon, hydrogen, and oxygen. *(4)*
____

3 a perspective or approach that places a disproportionate emphasis on European culture, history, and values. *(11)*
_____

4 a perspective or approach that places a disproportionate emphasis on European culture, history, and values. *(11)*
_____

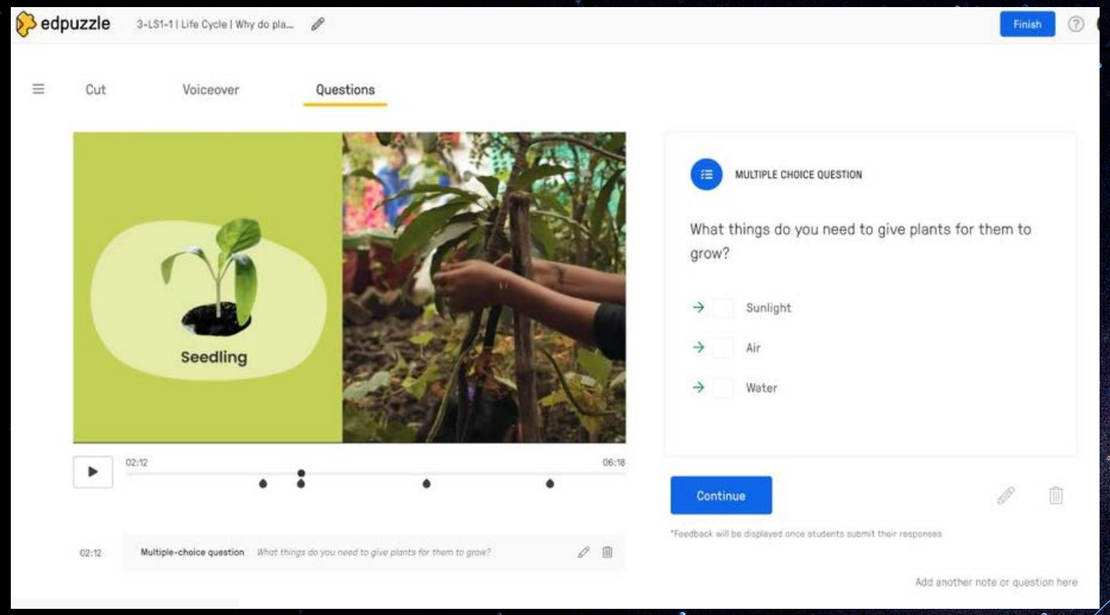
NOLEJ AI

- Interactive Course
  - Transcription
  - Crossword
  - Drag the word
  - ...



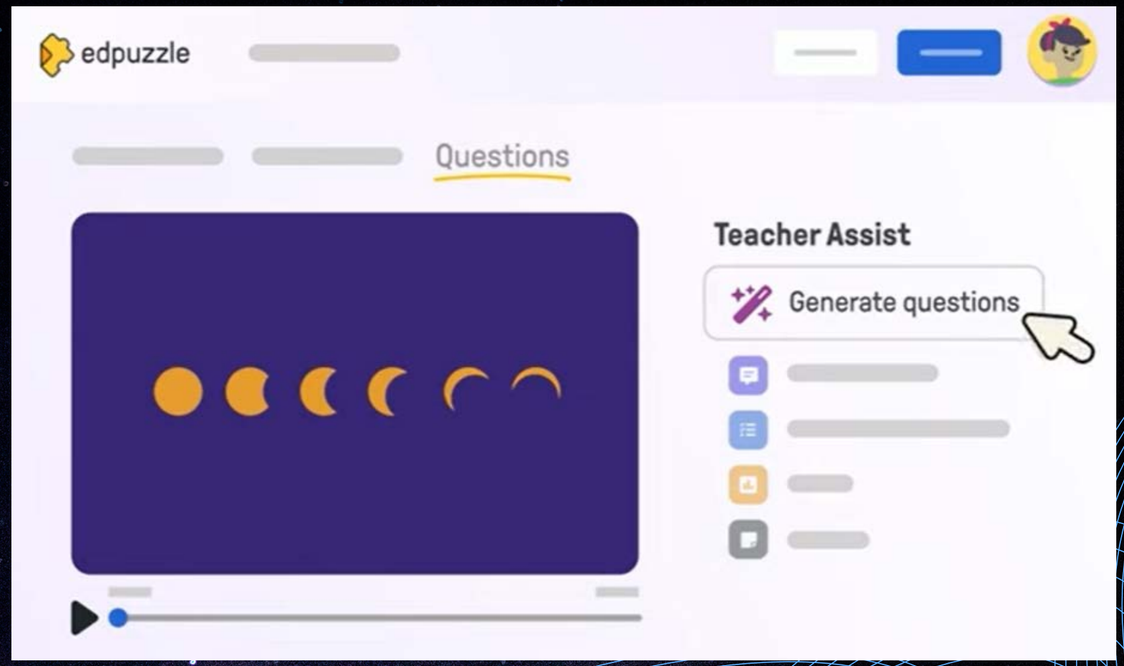
Edpuzzle

A web-based eLearning platform that provides video upload and customization features, along with the flexibility to select videos from YouTube.



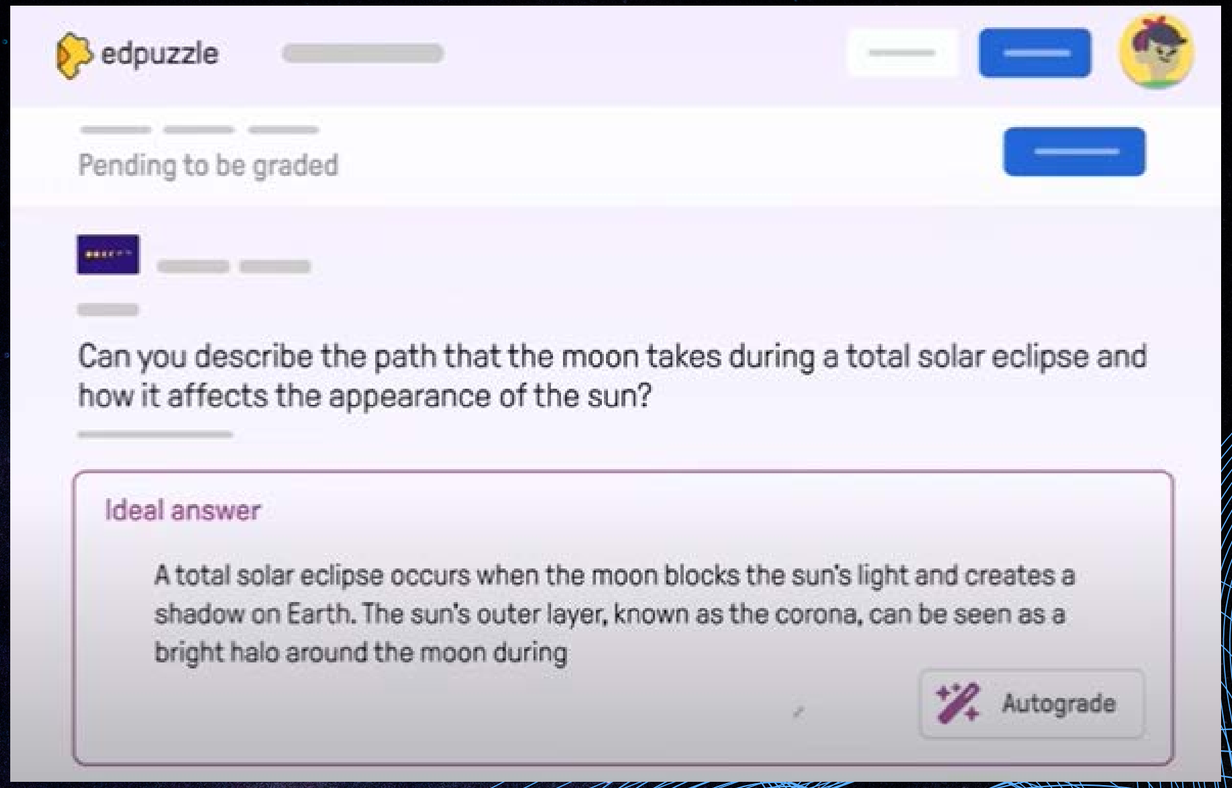
Edpuzzle

- Teacher Assist features
  - Generate Questions



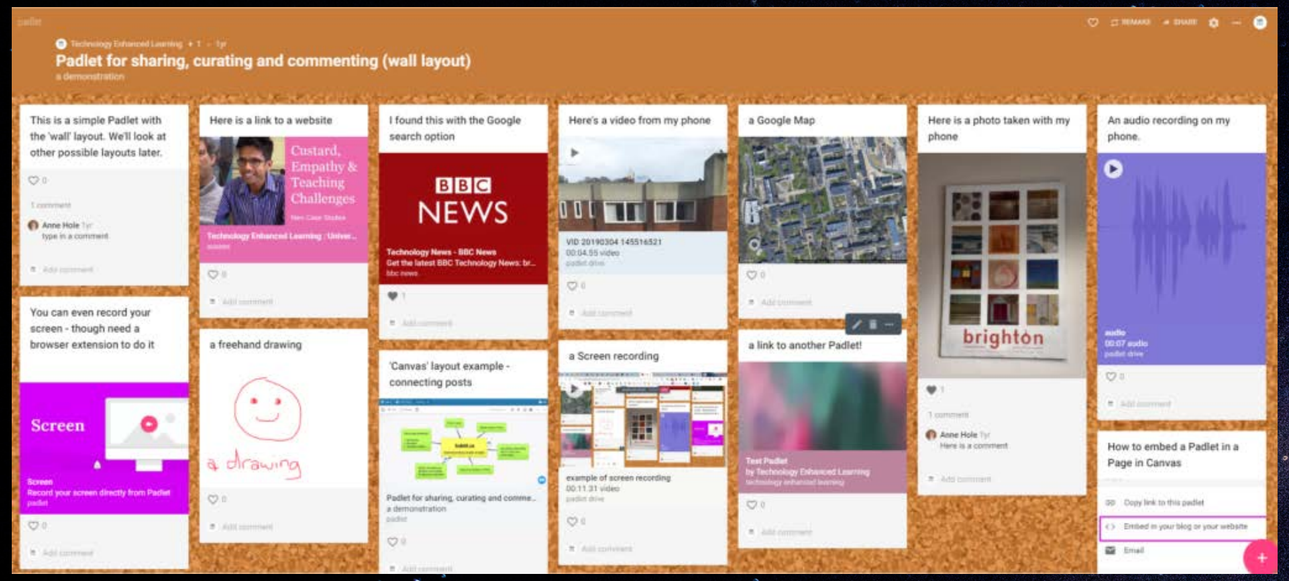
Edpuzzle

- Teacher Assist features
  - Generate Questions
  - Autograde



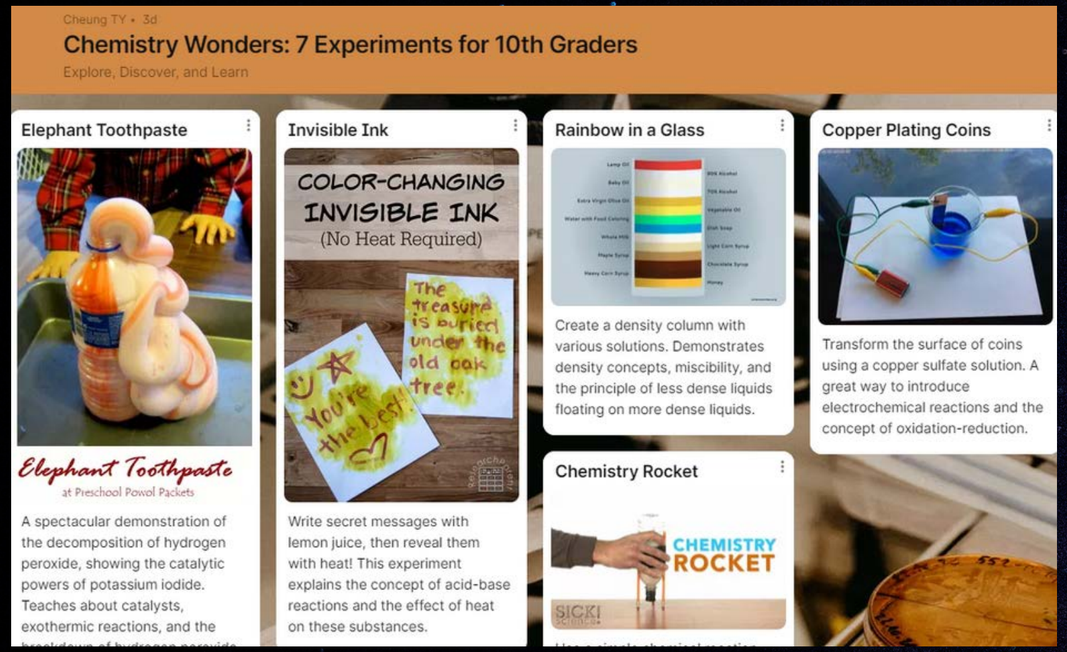
Padlet

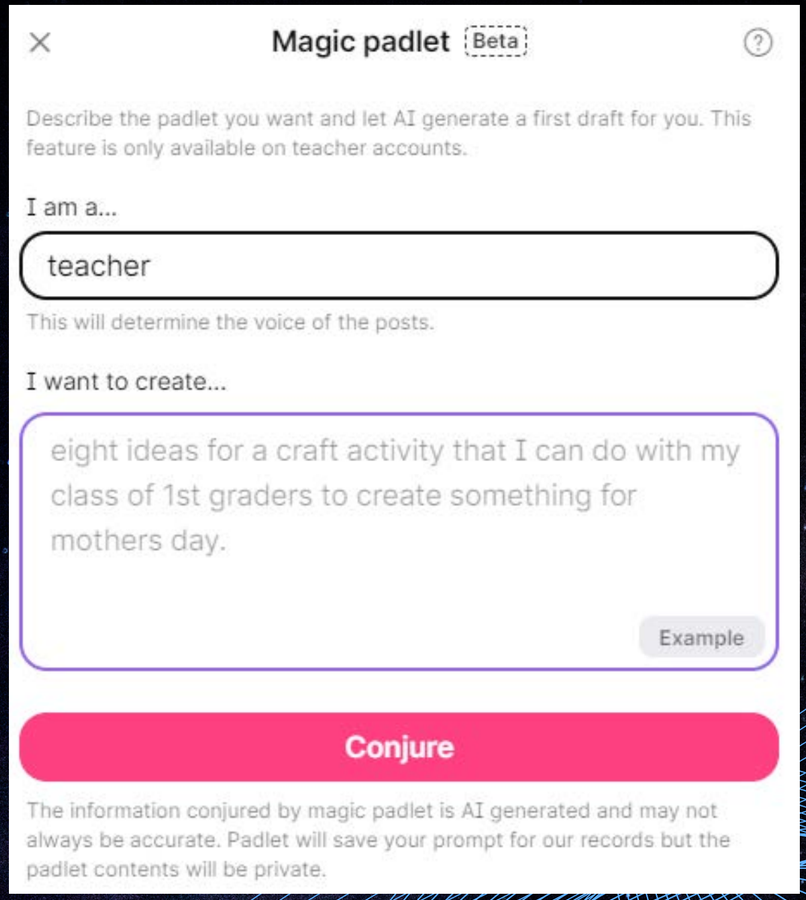
A collaborative platform that empowers teachers to share posts and facilitates seamless online collaboration and interaction among students.



Padlet

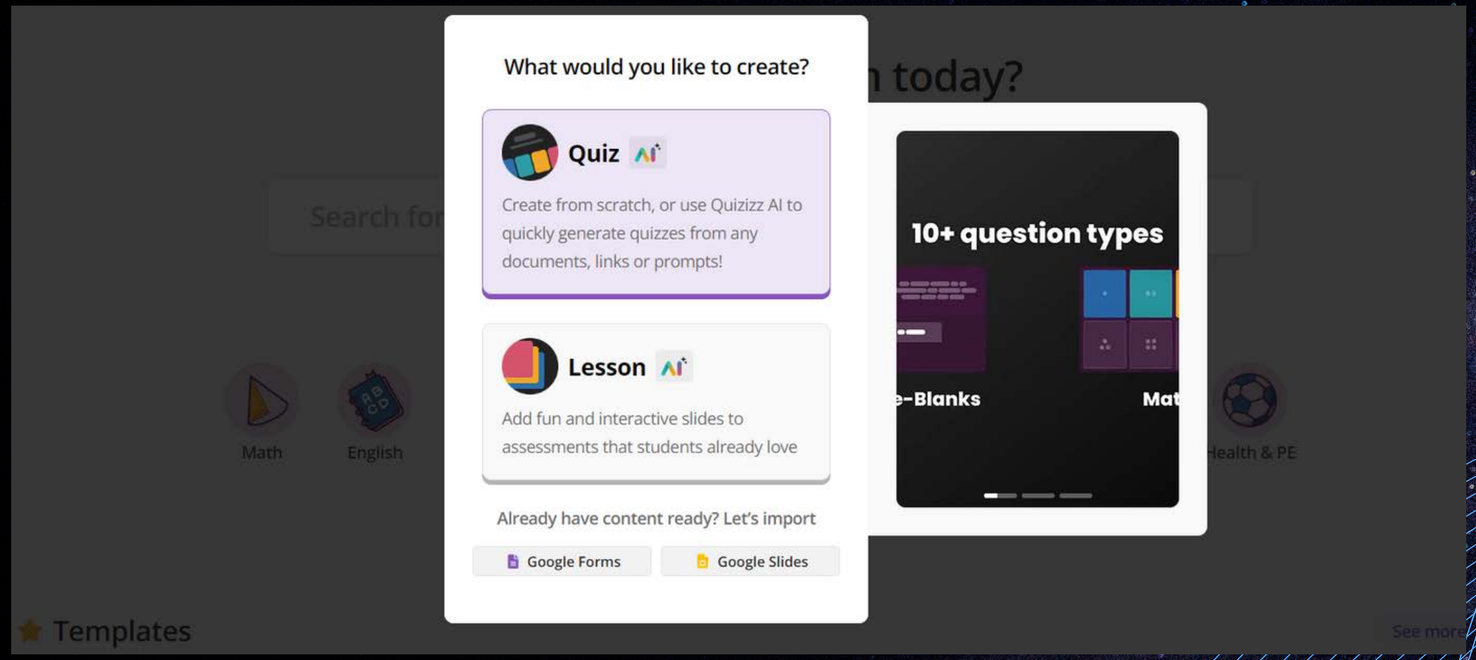
- **Magic Padlet**





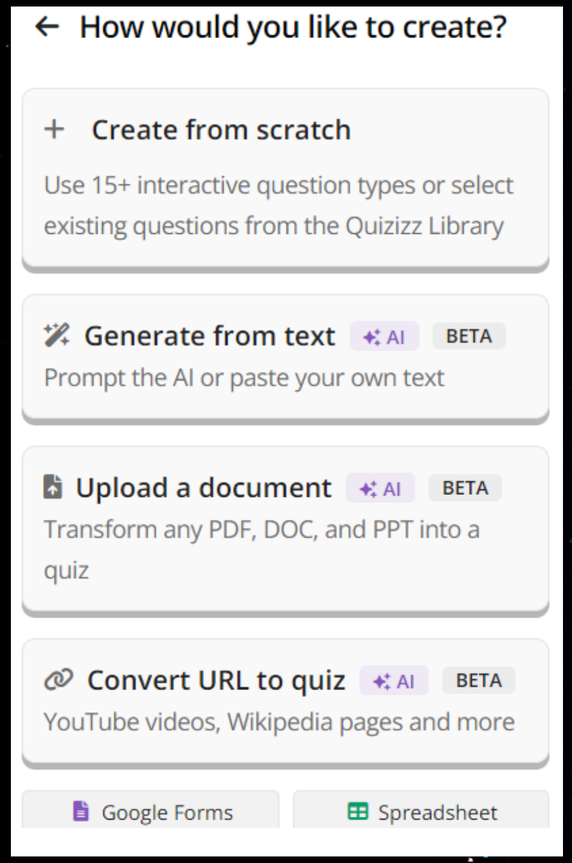
Quizizz

A quiz building platform that facilitates deeper student engagement through its interactive elements and thoughtfully crafted design.



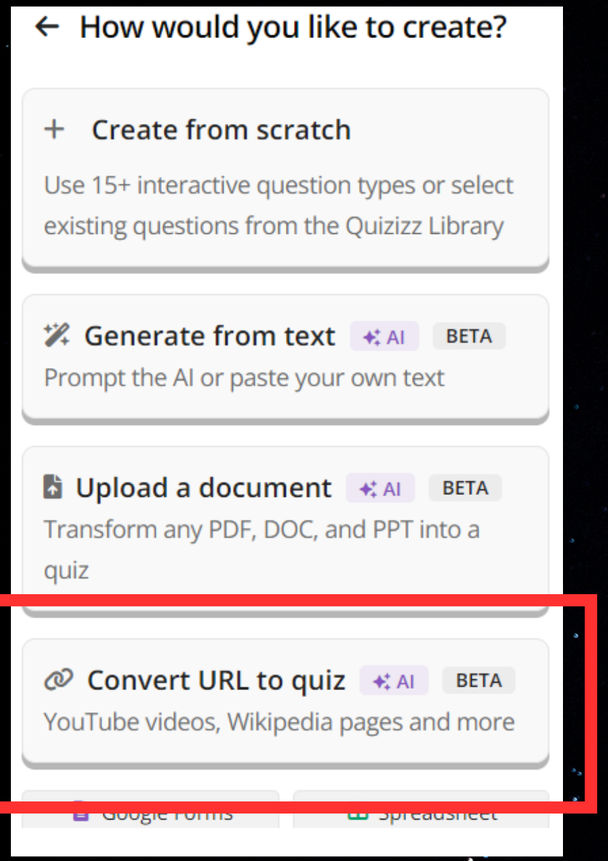
Quizizz

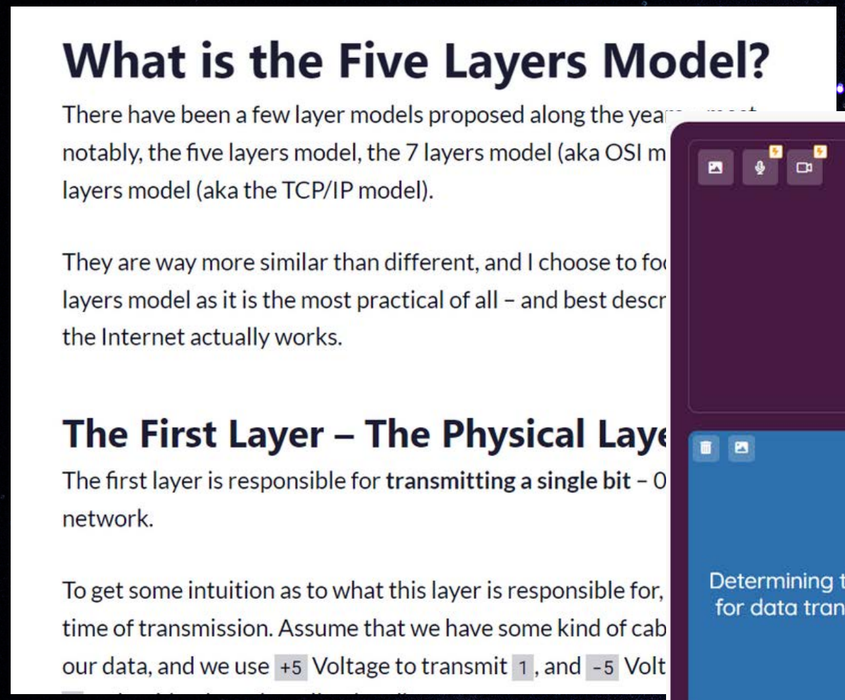
- QuizAI

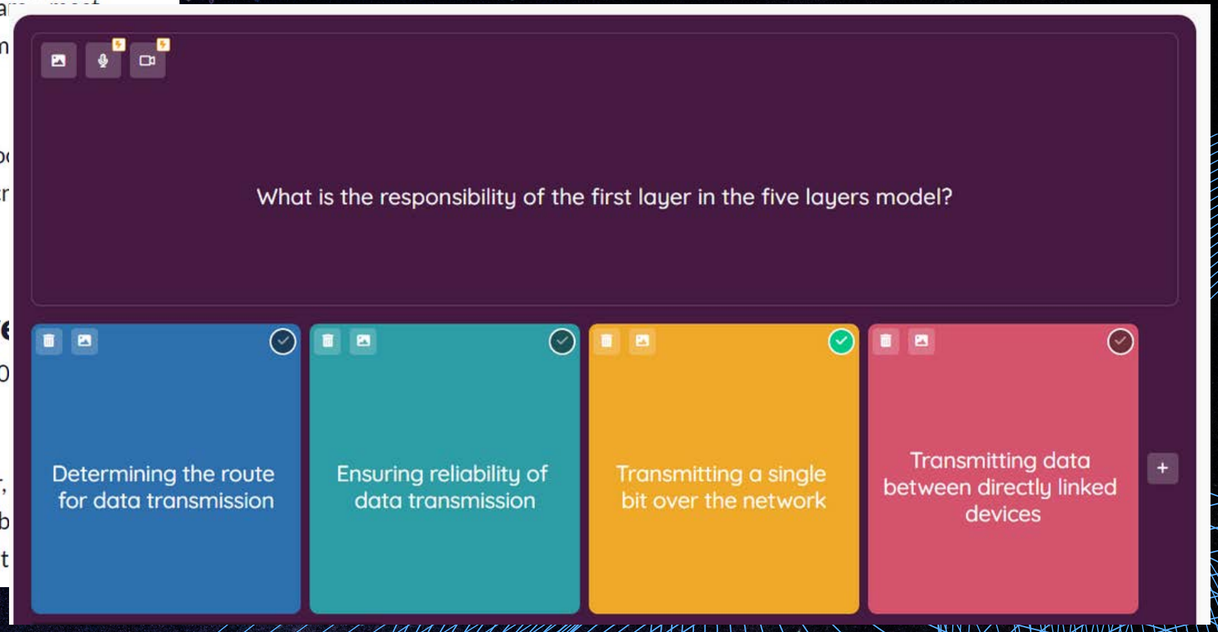


Quizizz

- QuizAI

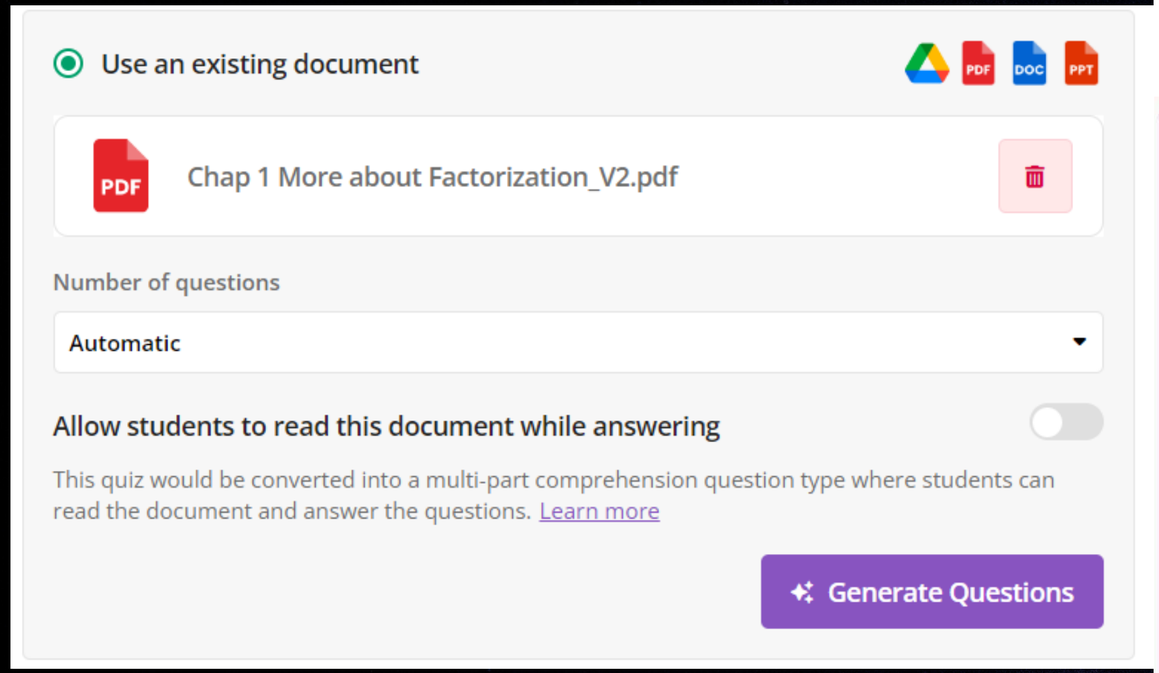






Quizizz

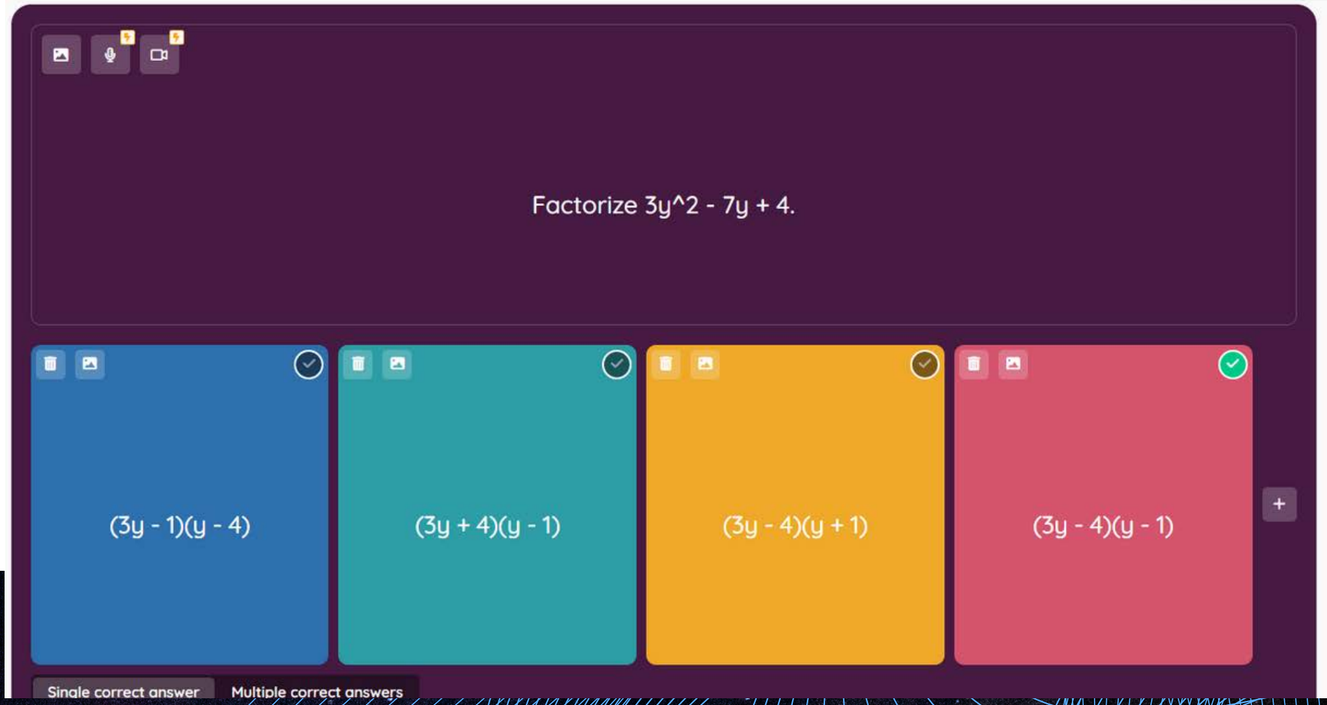
- QuizAI



F.3 Chapter 1 More About Factorization_V2

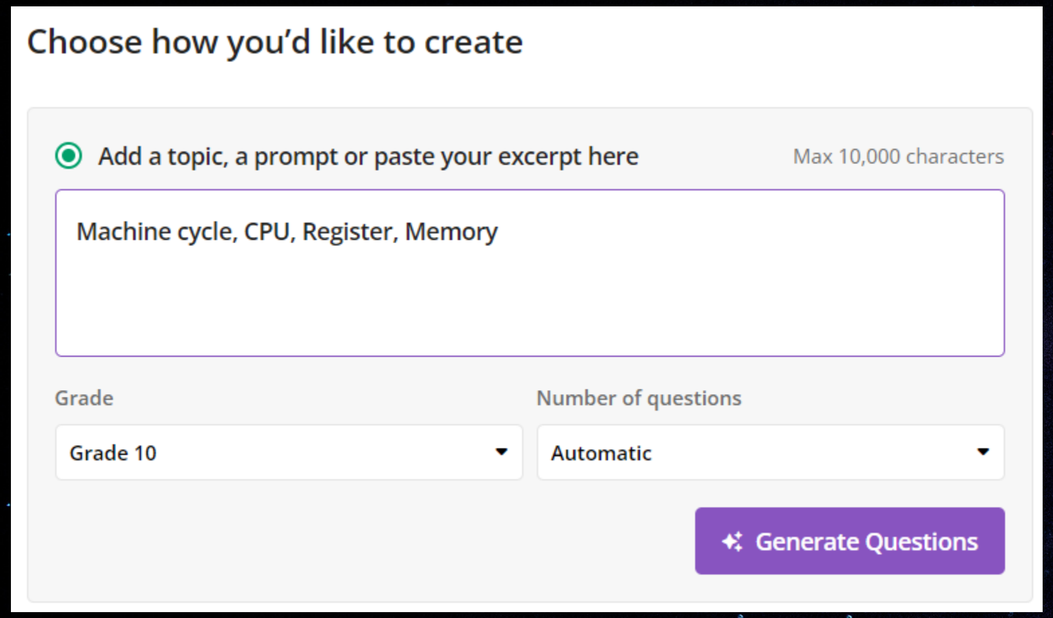
II. Factorize polynomials in the form of $px^2 + qx + r$

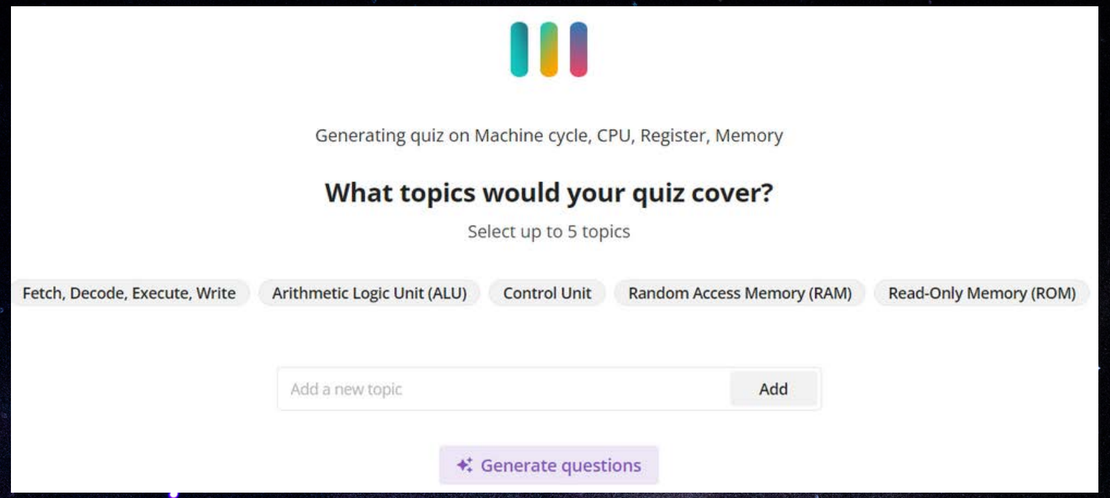
Example 1.10 Factorize $3y^2 - 7y + 4$.

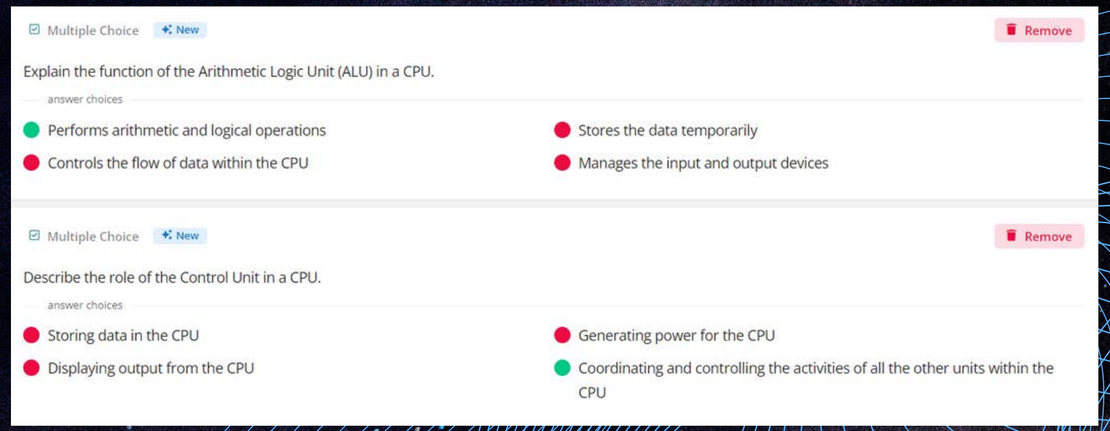


Quizizz

- QuizAI

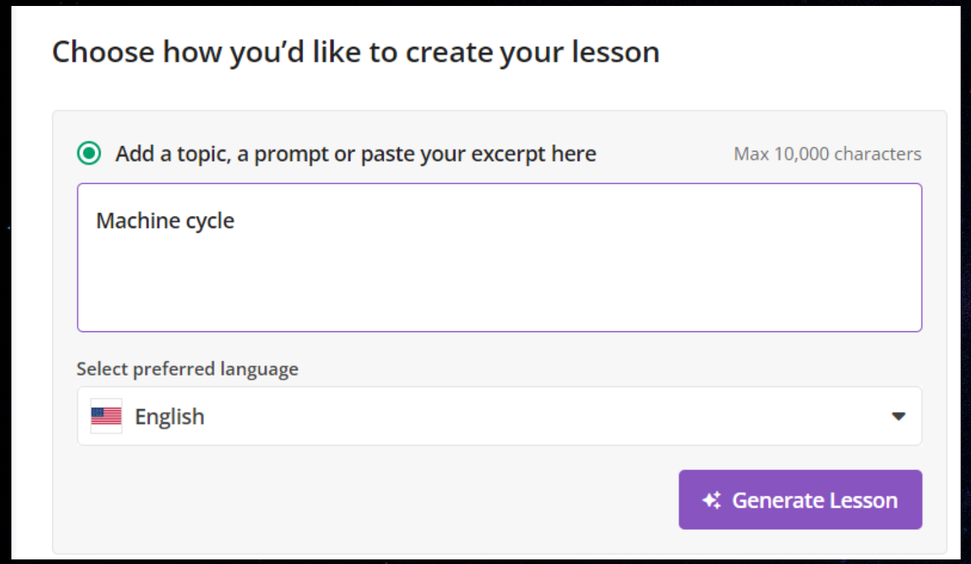


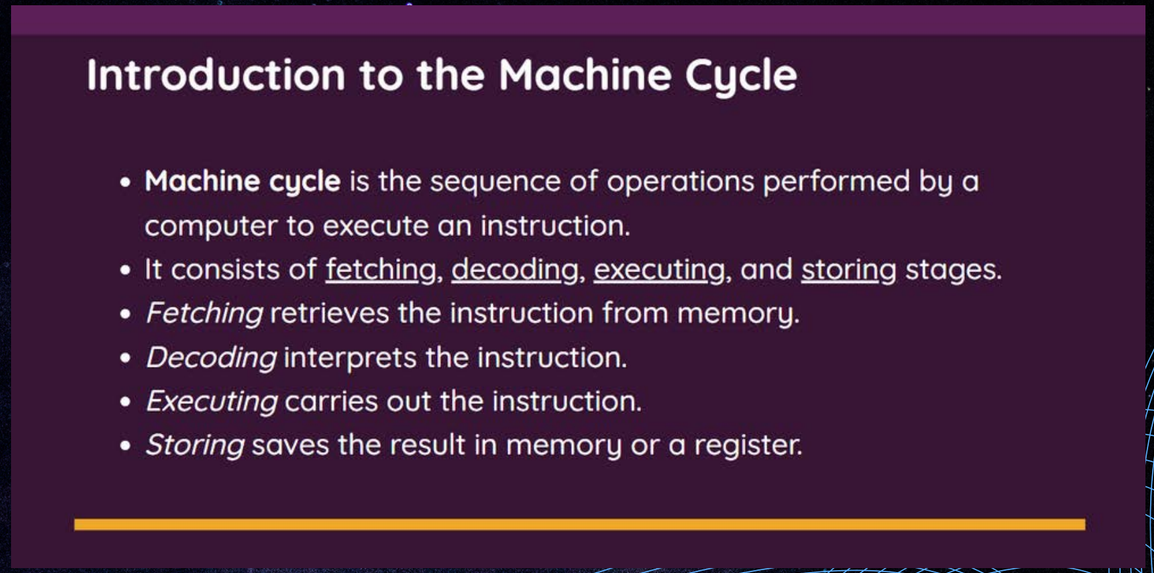




Quizizz

- LessonAI





Applying Generative AI in education opens a world of possibilities, revolutionizing the way we learn and explore.

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(ChatGPT, 2023)

Thank You!