

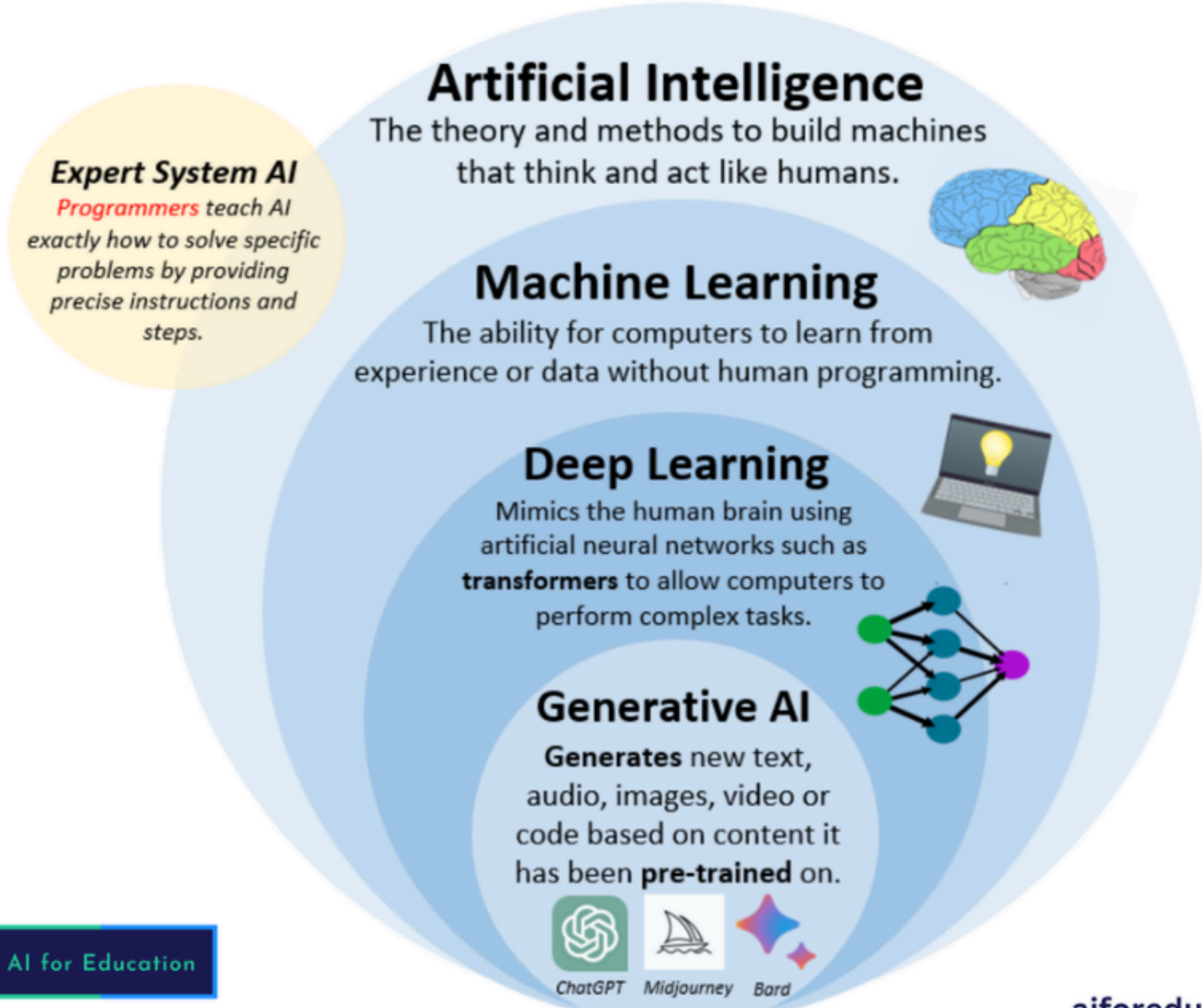
WRITING IN THE AGE OF AI

Generative AI as a teaching assistant
in essay planning and writing

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Defining Generative AI

To understand generative artificial intelligence (GenAI), we first need to understand how the technology builds from each of the AI subcategories listed below.



TERMINOLOGY

- **Algorithm:** An algorithm is a set of instructions that tells a computer how to solve a problem. Algorithms are used in a wide variety of AI applications, including natural language processing, machine learning, and computer vision.
- **Artificial Intelligence:** AI is the simulation of human intelligence in machines programmed to think and mimic human actions, like learning and problem-solving.
- **Bias:** The presence of systematic and undesired preferences or imbalances in the output generated by an AI model. Bias can emerge in various forms, such as in the content, language, or perspectives generated by the AI system.
- **Chatbot:** A chatbot is a computer program that simulates human conversation through text or voice. Chatbots are often used in customer service applications, where they can answer questions and provide support to customers without the need for human intervention.
- **Data Mining:** Data mining is a process of discovering new knowledge from large amounts of data. It is a subset of AI that uses machine learning & mathematical techniques to extract knowledge from data that can be used for fraud detection, risk management, & more.

TERMINOLOGY

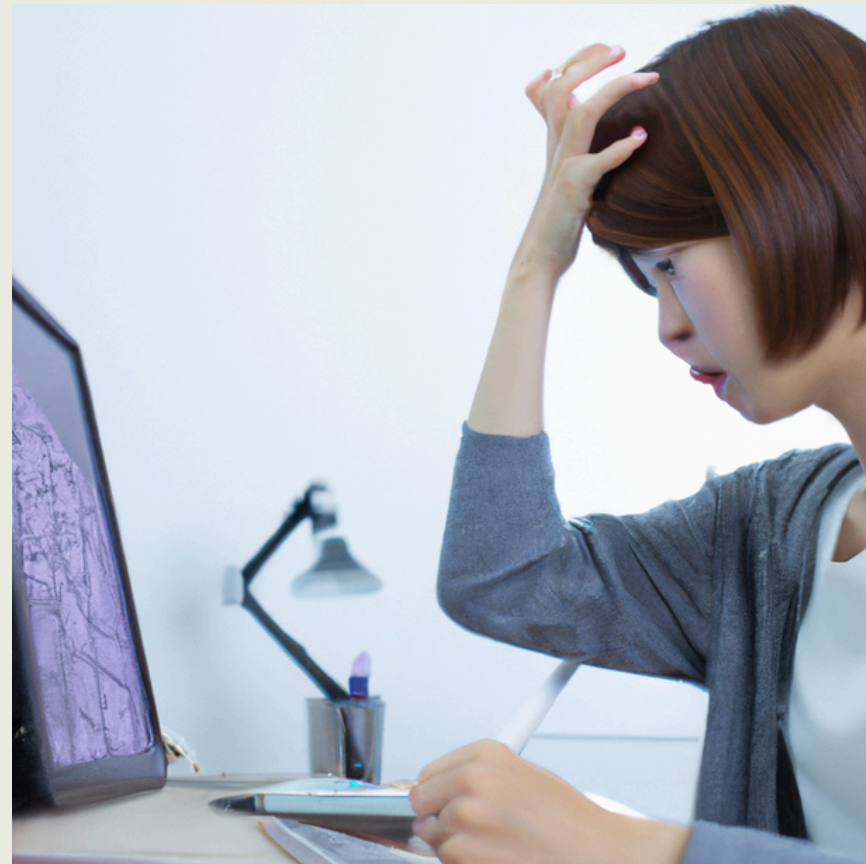
- **Ethical/Responsible AI:** Ethical and thoughtful development and use of AI systems so that fairness, transparency, privacy, and societal impact are primary considerations. This is to ensure that AI benefits society while minimizing potential harms.
- **Generative AI:** AI systems that can generate new content, such as text, images, or music. It involves developing algorithms and models that can understand patterns in existing data and use that understanding to generate novel output.
- **Hallucination:** In AI, a hallucination refers to a mistake or error made by a model where it generates incorrect or nonsensical output that do not align with reality or the intended task.
- **Large Learning Model (LLM):** Components of artificial intelligence developed based on the training of vast datasets of documents from various sources. The computer program analyzes data input and maps out words in the dataset. It next tries to predict which words are positioned before or after other words using predictive patterns of most likely combinations.
- **Machine Learning:** Machine learning (ML) is a subset of AI that allows software applications to become more accurate in predicting outcomes without being explicitly programmed to do so.
- **Natural Language Processing (NLP):** NLP is a branch of AI that deals with the interaction between computers and human (natural) languages. It encompasses a wide range of tasks, including text analysis, chatbots, speech recognition, and more.

TERMINOLOGY

- **Neural Network:** A neural network is a method in artificial intelligence that teaches computers to process data in a way that is inspired by the human brain. It is a type of machine learning process, called deep learning, that uses interconnected nodes or neurons in a layered structure that resembles the human brain. It creates an adaptive system that computers use to learn from their mistakes and improve continuously.
- **Pattern Recognition:** A field of computer science that deals with the automatic discovery of predictive information from data. It is an area of machine learning that develops algorithm that can recognize data patterns & use them to make predictions.
- **Plugins:** Software components or modules that can be added to existing programs or systems to extend their functionality, allowing for customization without altering the core software.
- **Prompt:** The initial input text or instructions given to a model to generate new content based on that starting point. It provides context and guides the model's output. The prompt can be a few words or sentences that set the tone or specify the desired content.

COMMON CHALLENGES IN ESL ESSAY WRITING

- Vocabulary
- Sentence-level Structure
- Grammar issues
- Idea generation
- Self-reflection



MY FRIEND, MY ASSISTANT..?

- **Research Capabilities:** AI tools can help students conduct research more efficiently by quickly gathering relevant information and providing diverse perspectives, allowing for more comprehensive essays.
 - **Pitfall:** Hallucinations, bias, tools consume personal and private data .
- **Improved Writing Skills:** AI-powered writing assistants can offer real-time feedback on grammar, style, and structure, helping students refine their writing skills over time.
 - **Pitfall:** Risk of Overreliance.
- **Personalized Learning:** AI can provide tailored writing prompts and suggestions based on a student's individual learning needs, fostering a more personalized educational experience.
 - **Pitfall:** Risks for Plagiarism.

MY FRIEND, MY ASSISTANT..?

- **Assessment Adaptation:** New assessment strategies that go beyond traditional essay formats, such as: incorporating oral presentations or reflective journals, to accurately measure a student's understanding and skills in an AI-influenced landscape.
- **Maintaining Academic Integrity:** Strict policies and educational practices to combat plagiarism and misuse of AI tools, including teaching students about ethical writing practices and the importance of original thought.
- **Skill Disparities:** The challenge to ensure equitable learning experiences and support for all students.
- **Training and Familiarization:** We *require* training and resources to effectively integrate AI tools into our teaching methodologies. Familiarization is time-consuming and requires additional funding and institutional support.
- **Monitoring Student Progress:** AI tools provide extensive assistance, thus we find it difficult to track individual student progress in writing skills and critical thinking, which in turn means elevated difficulty in identifying areas in need of focus.
- **Resistance to Change:** Some of us may be resistant to adopting AI in our teaching practices. We might feel AI tools undermine traditional teaching methods or complicates our curriculum.

EFFECTIVE PROMPTING

1. Be Specific & Clear

- **Instead** of: *"Help me write about youth crime."*
- **Try:** *"Can you suggest three causes of youth crime with examples?"*

2. Use Step-by-Step Instructions

- Example: *"First, give me a topic sentence about peer pressure and youth crime. Then, suggest two supporting details."*

3. Ask for Different Styles or Revisions

- **Example:** *"Can you rewrite this paragraph in a more formal tone?"*
- **Example:** *"Give me a simpler version of this sentence for a younger audience."*

4. Use Role-Based Prompts

- **Example:** *"Pretend you are a teacher. How would you give feedback on this paragraph?"*
- **Example:** *"Act as a student writing an argumentative essay on youth crime—what would your main argument be?"*

5. Ask for Alternatives

- **Example:** *"Give me three different ways to start my paragraph on youth crime prevention."*

SAMPLE LESSON PLAN

Lesson objectives

- **Main Goal:**

- Develop paragraph and sentence-level writing skills, with a focus on youth crime.

- **Skills Developed:**

- Writing skills
- Audio/Reading comprehension
- Collaboration skills
- Digital competency

SAMPLE LESSON PLAN

Lesson structure

Time	Activity	Focus
5 min	Warm-up	Introduce youth crime & AI tools
15 min	Collaborative Paragraph Writing	Brainstorming, drafting, AI feedback
10 min	Peer Review & Refinement	Feedback, clarity, structure
10 min	Class Discussion & Reflection	AI assistance, teamwork, skills growth
5 min	Homework & Wrap-up	Independent writing, final takeaways

SAMPLE LESSON PLAN

Warm-up

Goal: Engage students & introduce the topic

- **Discussion Questions:**

- What is youth crime?
- What are some causes & solutions?
- How can AI help with writing?

- **Activity:**

- Use ChatGPT to define youth crime
- Demonstrate effective prompting techniques

Tools: Computer, Projector, Whiteboard

SAMPLE LESSON PLAN

Collaborative Paragraph Writing

Goal: Structure and draft a paragraph

- **Focus:**

- Topic Sentence
- Supporting Details
- Concluding Sentence

- **Group Activity:**

- Brainstorm a cause of youth crime
- Write a paragraph using ChatGPT for structure suggestions
- Revise paragraph with AI feedback

- **Key Vocabulary:**

- prevention, intervention, rehabilitation, opportunity, incarceration

Tools: Laptops/Tablets, Whiteboard

SAMPLE LESSON PLAN

Peer Review & Refinement

Goal: Improve paragraph quality

Feedback Questions:

- Is the topic sentence clear?
- Are supporting details relevant?
- Is the paragraph well-structured?

Vocabulary for Feedback:

- clarity, cohesion, flow, engagement, revise, refine, strengthen

Activity:

- Groups exchange paragraphs & use a checklist
- Ask ChatGPT for sentence clarity improvements

Tools: Peer-Review Checklist, Laptops/Tablets

SAMPLE LESSON PLAN

Class Discussion & Reflection

Goal: Evaluate writing process & AI use

Discussion Prompts:

- What did we learn about strong paragraphs?
- How did ChatGPT help us improve writing?
- What will we do differently next time?

Reflection Vocabulary:

- brainstorming, drafting, revising, confidence, growth, teamwork, AI assistance

Activity:

- Groups share final paragraphs & insights

Tools: Whiteboard for Note-Taking

SAMPLE LESSON PLAN

Homework & Wrap-Up

Assignment

Task:

- Write a paragraph on a different aspect of youth crime
- Use ChatGPT for initial feedback & refinement
- Submit final version + short reflection

Homework Keywords:

- research, independent work, honing skills

Tools: Handout with Assignment Instructions

CONCLUDING THOUGHTS

Don't trust AI*
(to do all of your work)

What happens with our data?

Nothing is for free:

- We are the product
- AI uses our input to train itself
- No magical solutions

ALWAYS CHECK THE OUTPUT

Are we going to be replaced by AI?

- If we don't teach the value of writing as a process, then why not outsource it?
- If all students care about is the grade, then LLMs can do the "formulaic" type of writing better than themselves.
- If it's all about the product, AI can and will replace us.



Grammarly

(Grammar & Clarity)

✓ What It Does:

Corrects grammar, punctuation, and clarity issues.

◆ Example:

Before:

He go to the school everyday because he want to learning.

After (Grammarly Correction):

He goes to school every day because he wants to learn.

Provides rewording suggestions to make writing concise.



ChatGPT

(Idea Generation & Structure)

01

✓ What It Does:

- Helps brainstorm topics and outlines.
- Suggests thesis statements and paragraph structures.

02

◆ Example:

Prompt:

"Give me three possible essay topics on climate change."

Response:

1. The Impact of Climate Change on Coastal Communities
2. How Renewable Energy Can Reduce Global Warming
3. The Role of Governments in Addressing Climate Change



(Paraphrasing &
Vocabulary
Improvement)

01

✓ What It Does:

Helps rephrase sentences while maintaining meaning.

◆ Example:

02

Before:

Technology is changing education by making learning more accessible.

After (QuillBot Paraphrase):

Education is evolving due to technology, making learning more reachable.

Suggests synonyms for better word variety.



Hemingway Editor

(Sentence Clarity & Readability)

01

✓ What It Does:

Highlights long or complex sentences.

◆ Example:

02

Before:

The main reason why students struggle with essays is because they do not know how to organize their thoughts in a structured manner.

After (Hemingway Suggestion):

Students struggle with essays because they lack structured organization.

Suggests simpler alternatives.



Perplexity AI

(Research & Citation)

01

✓ What It Does:

Provides summaries of research topics with citations.

◆ Example:

Prompt:

02

“Give me a summary of immigration policies in Europe.”

Response (Perplexity AI):

European immigration policies vary by country. The EU has common policies on asylum seekers, but nations have individual border control regulations. (Source: European Commission)

Helps ESL students find reliable sources.

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Thank you.

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