



The Future of AI

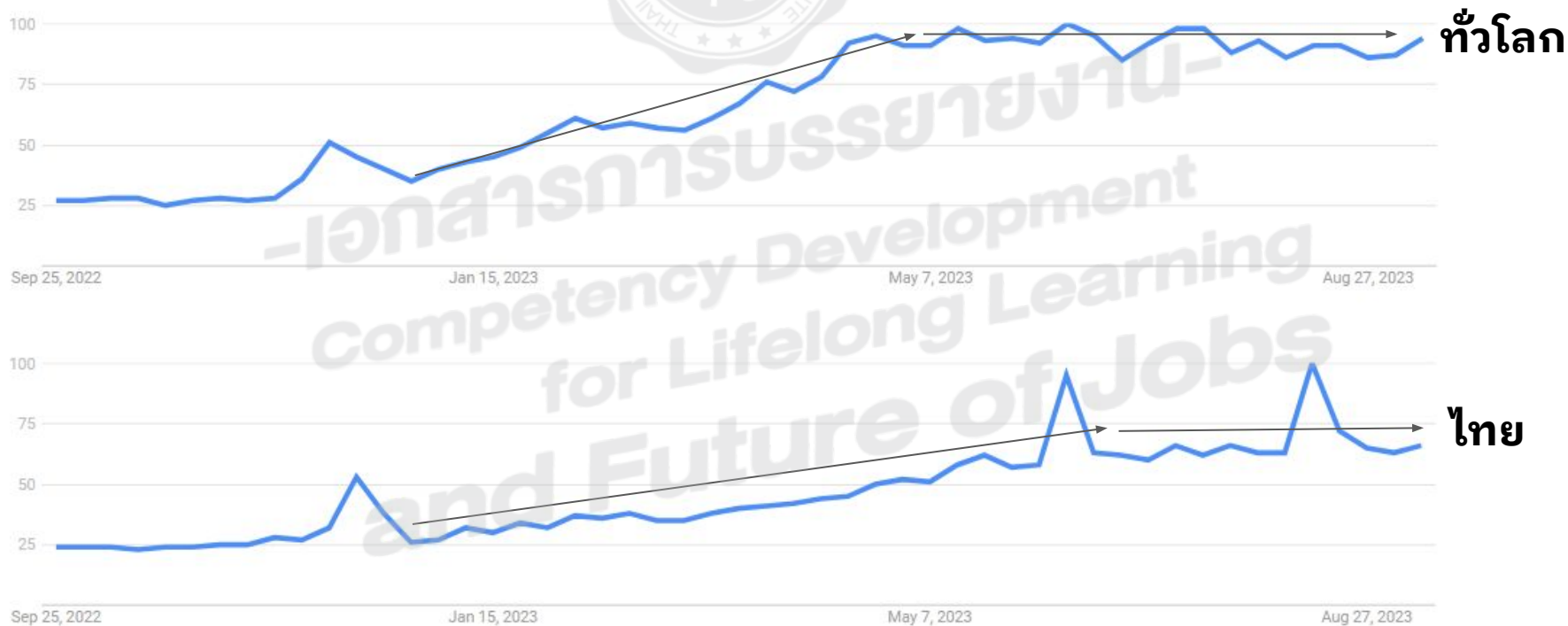
Unlearn to Relearn in the age of AI

คนที่ใช้ AI จะมาแทน **คนไม่ใช้ AI**



ขี้สงสัย 555+

Artificial Intelligence





History of AI

Competency Development
for Lifelong Learning
and Future of Jobs



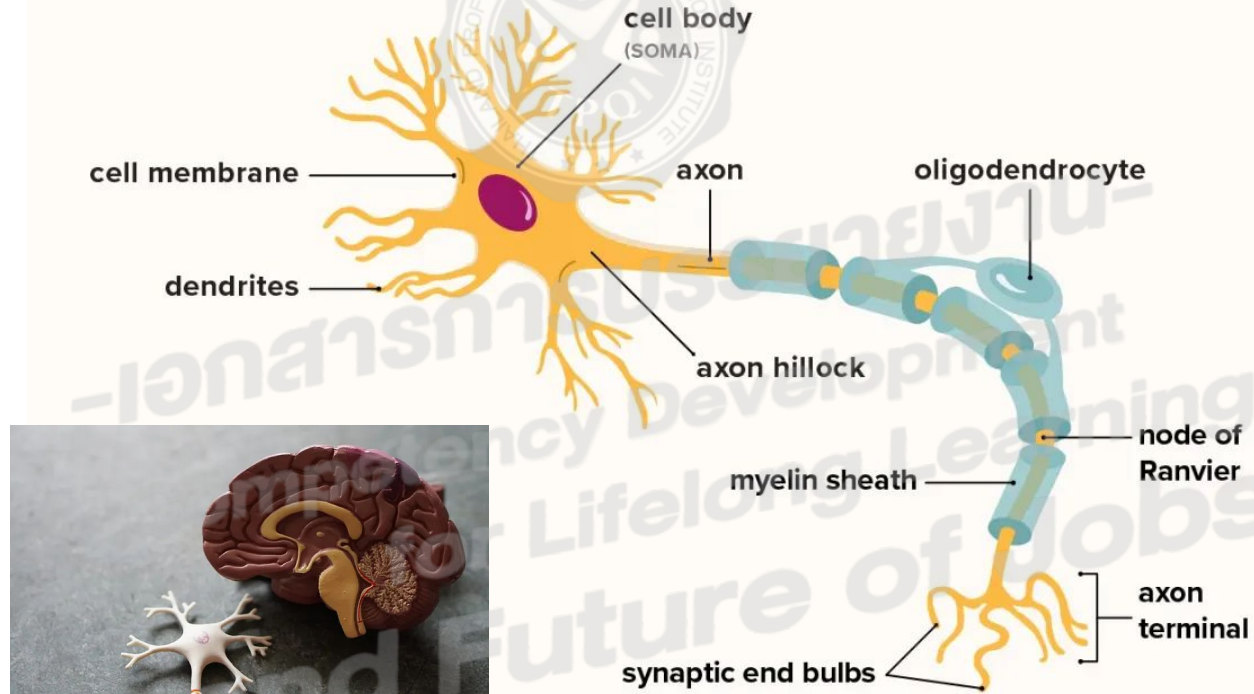
Arthur Samuel (1959)



Competency Development
for Lifelong Learning
and Future of Jobs

Human Learn From **Experiences**
Machines Learn From **Data**

Structure of a neuron





Frank Rosenblatt

Vol. VI, No. 2, Summer 1972

research trends
EDMUND AERONAUTICAL LABORATORY, INC., BUFFALO, N.Y.

The Design of an

Intelligent AUTOMATON

by FRANK ROSENBLATT

Introducing the perception — A machine which senses, recognizes, remembers, and responds like the human mind.

SCIENTISTS show the creation of machines having human qualities have long been a fascinating prospect in the realm of science fiction. Yet we are now close to witness the birth of such a machine — a machine capable of perceiving, recognizing, and identifying its surroundings. We are now close to witness the birth of such a machine — a machine capable of perceiving, recognizing, and identifying its surroundings. We are now close to witness the birth of such a machine — a machine capable of perceiving, recognizing, and identifying its surroundings.

Development of this machine has stemmed from a desire for understanding of the physical mechanisms which underlie human experience and cognition. The question of the nature of these processes is at least as ancient as any other question in science: nature and philosophy, and indeed, nature is one of the greatest scientific challenges of our time.

Our understanding of the problem has gone perhaps as far as the development of present "pattern" theories. We have some excellent descriptions of the phenomena to be explained, a number of interesting hypotheses, and a fairly detailed knowledge about events in the nervous system. But we lack a system that can integrate all of these facts into a single, coherent picture of the nervous system as a whole.

We believe now that the system problem is close to yield to our theoretical investigation for three reasons:

First, in recent years our knowledge of the functioning of individual cells in the central nervous system has greatly increased.

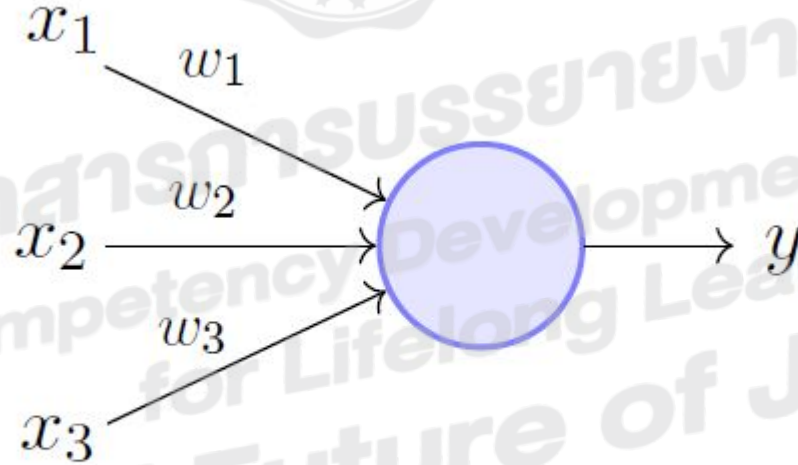
Second, large numbers of engineers and mathematicians are, for the first time, understanding some of the mathematical ideas that underlie the processes of the handling of information by the central nervous system, thus providing the hope that these problems may be within our intellectual grasp.

Third, recent developments in probability theory and in the mathematics of random processes provide new tools for the study of error in the nervous system, and the development of a theory of the nervous system and the process of "error diagnosis" may now be achieved.

Research Navy Support

In July, 1971, the Navy's DARPA (Defense and Research Agency), as several research programs which had been in progress for over a year at General Aeronautical Laboratory, received the support of the Office of Naval Research. The program had been concerned primarily with the application of probability theory to

Perceptron



Perceptron Model (Minsky-Papert in 1969)

Deep Neural Network

Deep Neural Network

ChatBot



ChatGPT: Optimizing Language Models for Dialogue

We've trained a model called ChatGPT which interacts in a conversational way. The dialogue format makes it possible to challenge incorrect premises, and request more specific responses. ChatGPT is a sibling model to GPT-3, which is trained to follow an instruction in a prompt and generate a response.

A digital artwork depicting a grand, ornate hall with high ceilings and intricate architectural details. In the center, a large, glowing circular portal emits a bright light, revealing a distant, hazy landscape. Several figures in historical or fantasy-style clothing are present: a woman in a long orange gown stands on the left, a man in a white robe stands in the center, and a woman in a long orange gown stands on the right. Other figures are visible in the background near the portal. A large, semi-transparent watermark is overlaid on the image, featuring a circular logo with the text 'THAI PROFESSIONAL QUALIFICATION INSTITUTE TPQ' and Thai text 'สสย' and 'ศูนย์พัฒนาการเรียนรู้ตลอดชีวิต'. The word 'Midjourney' is prominently displayed in the center in a bold, black font.

Midjourney

A woman with long dark hair, wearing sunglasses, a black leather jacket, and a red dress, walks towards the camera on a wet, reflective street at night. The street is lined with buildings featuring numerous brightly lit neon signs in various colors (red, yellow, blue, white). The wet pavement reflects the lights, creating a vibrant, colorful scene. Other pedestrians are visible in the background, some walking away and others towards the camera. A large, semi-transparent watermark is visible across the center of the image.

Sora Video Generator

00:01



bt:



การพัฒนาศักยภาพ
Competency Development
for Lifelong Learning
and Future of

Augmentation vs. Automation



✓ Best Use

AI for Education





Geoffrey Hinton
@geoffreyhinton



Extrapolating the spectacular performance of GPT3 into the future suggests that the answer to life, the universe and everything is just 4.398 trillion parameters.

3:26 AM · Jun 11, 2020



67



736



3,747



87





Introducing Bard, an experimental conversational AI service powered by LaMDA

You can use Bard to —

Plan a friend's baby shower

Compare two Oscar nominated movies

Get lunch ideas based on what's in your fridge

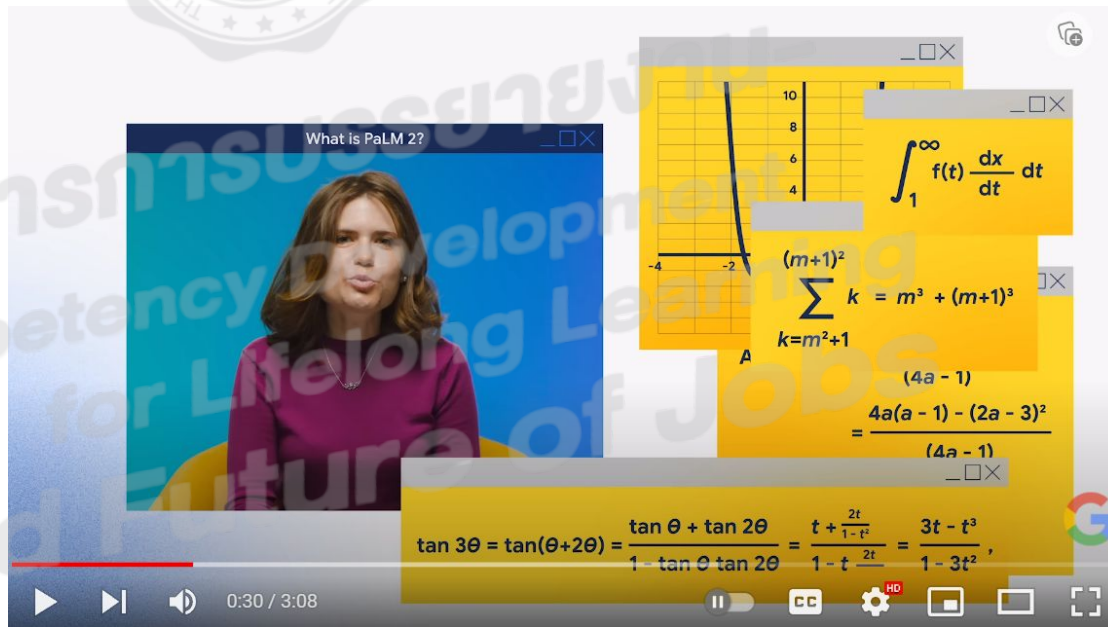
What's on your mind?



Bard may give inaccurate or inappropriate information. Your feedback makes Bard more helpful and safe.

PaLM2 was trained on 100 spoken word languages and over 20 programming languages

Including scientific papers



What is PaLM 2?



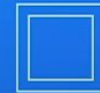
Math



Code



Reasoning



**Multilingual
translation**

What's next?

T

</>



and even to generate
video, audio and images.



Prompt: "Generate a realistic photo of a person looking off camera during sunset. Portrait mode so the background is faded."

How Large Language Models power generative AI



Generative AI and Large Language Models (LLMs) are part of the same technology. Generative AI can be trained on any type of data, but LLMs use words as their main source of training data.

Experiences powered by LLMs, like Bard and Search Generative Experiences, can predict words that might come next based on your prompt and the text it's generated so far.

They're given flexibility to pick probable next words that match patterns they get from training. This flexibility lets them generate creative responses.

If you prompt them to fill in the phrase "Harry [blank]," they might predict the next word is "Styles" or "Potter."



I like to eat **cheese**

I like to eat cheese **burger**

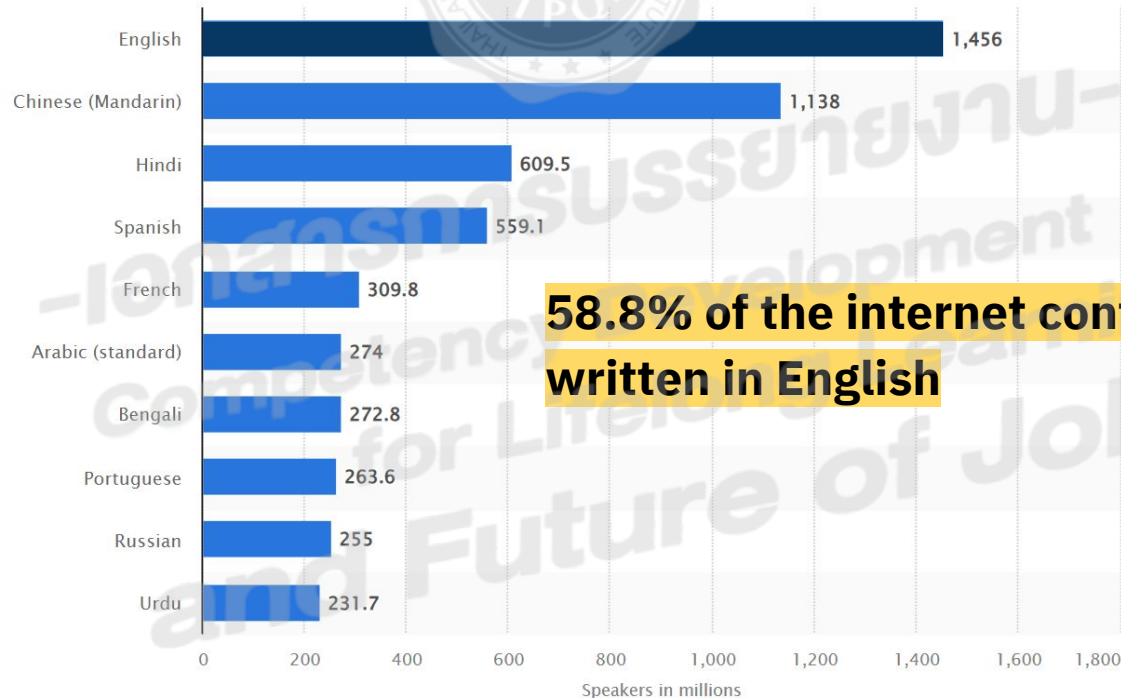
I like to eat cheese burger **with**

I like to eat cheese burger with **fries**

What LLMs can do?

1. Writing 
2. Reading 
3. Chatting 

English Users Worldwide 2024



**58.8% of the internet content
written in English**

**“English is the new
programming language**



-โครงการพัฒนา
Competency Development
for Lifelong Learning
and Future of Jobs



The Right Way To Use Gen AI, LLM

An aerial photograph of a coastal city, likely Honolulu, Hawaii. The image shows a dense urban area with numerous buildings and roads, situated on a flat plain. In the background, a large, rugged mountain (Mauna Kea) rises steeply, its slopes covered in green vegetation. The city is bordered by the ocean on the right side, with a sandy beach visible. The sky is blue with some white clouds. A large, semi-transparent watermark is visible across the center of the image, reading "AI Generated by Midjourney".

The Only Prompt



Teach me [subject] ...

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Teach me step by step how to write an effective marketing copy that drive sales



View other drafts



Here is a step-by-step guide on how to write an effective marketing copy that drives sales:

1. **Understand your target audience.** Who are you writing for? What are their needs and wants? What are their pain points? Once you understand your target audience, you can tailor your messaging to resonate with them.
2. **Define your goal.** What do you want your marketing copy to achieve? Do you want to generate leads, increase brand awareness, or drive sales? Once you know your goal, you can write copy that is specifically designed to achieve it.
3. **Choose the right platform.** Where will your marketing copy be published? Is it a website, landing page, email, or social media post? The platform you choose will determine the format and tone of your copy.
4. **Write a strong headline.** Your headline is the first thing people will see, so make it count. It should be clear, concise, and attention-grabbing.
5. **Highlight the benefits of your product or service.** What makes your product or service unique? What problems does it solve? What benefits does it offer? Focus on highlighting the benefits that are most important to your target audience.
6. **Use a clear call to action.** Tell your readers what you want them to do next. Do you want them to sign up for your email list, download a whitepaper, or make a purchase? Make sure your call to action is clear, concise, and easy to follow.

Action Verbs

- Explain
- Generate
- Create
- Perform
- Brainstorm
- Teach ..

Prompt Engineering

Prompt engineering is a discipline focused on designing and optimizing prompts to enhance the performance and reliability of AI models, particularly LLMs. By carefully crafting prompts, prompt engineers maximize the model's ability to understand and respond to user inputs, leading to more relevant and informative outputs.

Prompt Engineering

- Role
- Instruction
- Context
- Example



Prompt Engineering

- **R**ole
- **I**nstruction
- **C**ontext
- **E**xample






A More Detailed Prompt




"ฉันชอบกินไก่ทอด **KFC**"

"เฟรนช์ฟรายของ **McDonald**
อร่อยมาก กรอบ" 

"เมื่อวานแวะไปกินสุกี้ที่ **MK**
กับเพื่อน"




Please translate below Thai reviews into English.

["ฉันชอบกินไก่ทอด KFC", "เฟรนช์ฟรายของ McDonald อร่อยมาก กรอบ", "เมื่อวานแวะไปกินสุกี้ที่ MK กับเพื่อน"]

Then, do sentiment analysis using options [neutral, negative, positive] and extract brand names from the reviews.

Send your response in a table format with four columns: ["Thai message", "English message", "sentiment", "brand"]

Thai message	English message	sentiment	brand
ฉันชอบกินไก่ทอด KFC	I love KFC chicken	positive	KFC
เฟรนช์ฟรายของ McDonald อร่อยมาก กรอบ	McDonald's French fries are delicious and crispy	positive	McDonald's
เมื่อวานแวะไปกินสุกี้ที่ MK กับเพื่อน	I went to MK for sukiyaki with my friends yesterday	positive	MK
 Export to Sheets			

Sentiment analysis

The first review is positive because it expresses a liking for KFC chicken. The second review is also positive because it expresses an appreciation for the deliciousness and crispiness of McDonald's French fries. The third review is positive because it expresses a positive experience of eating sukiyaki at MK.

Brand extraction

The brand names extracted from the reviews are KFC, McDonald's, and MK.

I hope this is helpful. Let me know if you have any other questions.



48 years

Andrew Ng

Founder of Google Brain, Coursera,
AI Fund, Landing AI





Jaime Teevan
Chief Scientist, Microsoft



Andrew Ng
Founder, DeepLearning.AI



Kevin Scott
CTO and Executive Vice President
of AI, Microsoft



Jensen Huang
CEO, President and Co-Founder,
Nvidia



Clara Shih
CEO, Salesforce AI



Alexandr Wang
CEO and Founder, Scale AI

The 100 Most Influential People in AI 2023 | TIME



ไหว้ครูก่อน 555+



AI is the new electricity.

Transform every industry





General Purpose Technology



AI

We can use AI to create
other applications, a lot!

app

app

app



AI is a set of tools

Competency Development
for Lifelong Learning
and Future of Jobs





Supervised
Unsupervised
Reinforcement
Generative

Thailand Professional Qualification Institute (TPQ) logo with text: THAILAND PROFESSIONAL QUALIFICATION INSTITUTE, TPQ, and Thai text: -สถาบันพัฒนาสมรรถนะวิชาชีพเพื่อการพัฒนาที่ยั่งยืน





Supervised

Generative



Supervised Learning

Input	Output	Application
Email	Spam (0/1)	Spam Filtering
Ad, User Info	Click (0/1)	Online Advertising
Image, Radar	Position of other cars	Self-Driving Car
Ship Route	Fuel Consumed	Fuel Optimization
Image of Phone	Defect (0/1)	Visual Inspection
Reviews	Sentiment (pos/neg)	Reputation Monitoring



Generative AI

AI that can create new contents: text, image, video, audio, code



Text Generation

I love eating

Prompt

Yen Ta Fo
Roti Kluay

AI Output



Use Cases

1. Answering questions
2. Copyeditor
3. Brainstorming partner
4. Writing summarise



Prompt Revolution

From code to prompt; A new way to work with AI





Prompt



AI



Result

Write an essay on topic X





AI

Application Development

New way to create software with prompt engineering



The Past

**Get Labeled
Data**

1 Month

Train AI Model

3 Month

**Deploy
Model**

3 Month



The Future

**Write
Prompt**

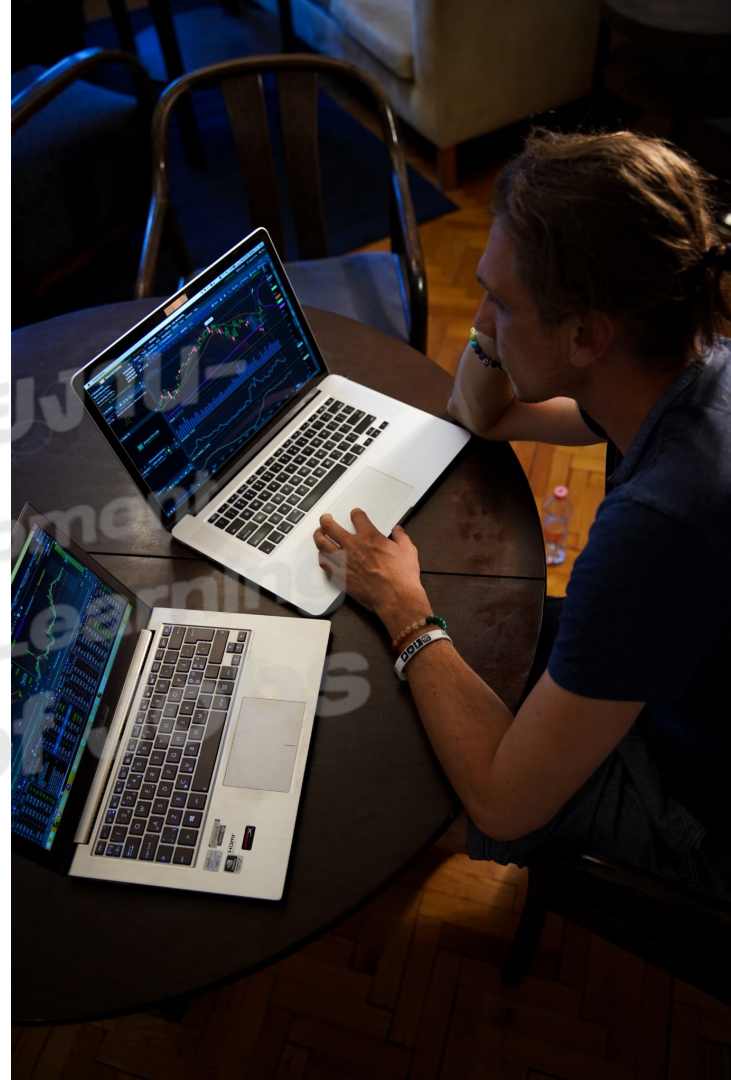
**Deploy
Model**

Minutes to
Hours

Hours to
Days



Large Scale Training



Performance

Large Scale

Small Scale

Amount of Data





Voronoi by Visual Capitalist

<https://posts.voronoiaapp.com> › technology › The-Trainin... ⋮

The Training Costs of AI Models Over Time

May 22, 2567 BE — ... GPT-4 last year. Google's AI model, Gemini Ultra, costs even more, at a staggering **\$191 million**. As of early 2024, the model outperformed GPT ...



**High Wage
Worker will
Be Affected
More**



Exposure to AI

\$30K

\$163K

**Annual Wage
(Log Scale)**



USSS ยายจาม
การพัฒนา
Competency Development
for Lifelong Learning
and Future of Jobs

50%

20%



Educator and Workforce Training

39

Business and Legal Professionals

30

STEM Professionals

29

Community Services

26

**Creative and Art
Management**

25

Managers

17

**Customer
Service/ Sales**

12

A person is standing on a wooden ladder in a workshop or construction site, reaching up to adjust a light fixture on the ceiling. The scene is dimly lit, with a warm glow from a light source on the right. In the background, there is a large, semi-transparent watermark. The watermark features a circular logo at the top with the text 'THAI PROFESSIONAL QUALIFICATION INSTITUTE' and 'TPQ' in the center. Below the logo, there is Thai text 'ศูนย์พัฒนาสมรรถนะ' and English text 'Competency Development Center for Lifelong Learning and Future of Jobs'.

New Way to Work

AI Automate Tasks, Not Jobs



Customer Service Representative

Tasks	AI Potential
Answer customer text chat queries	High
Keep records of customer interactions	High
Check status of orders	Medium
Answer phone calls	Low
Triage complaints	Medium





Agentic Workflows

Agency Development
for Lifelong Learning
and Future of Jobs

Non-Agentive Workflow (zero-shot)

Please **type out** an essay on topic X from start to finish in one go, without using backspace.

Start -> Finish





Agentic Workflow

Write an essay outline on topic X

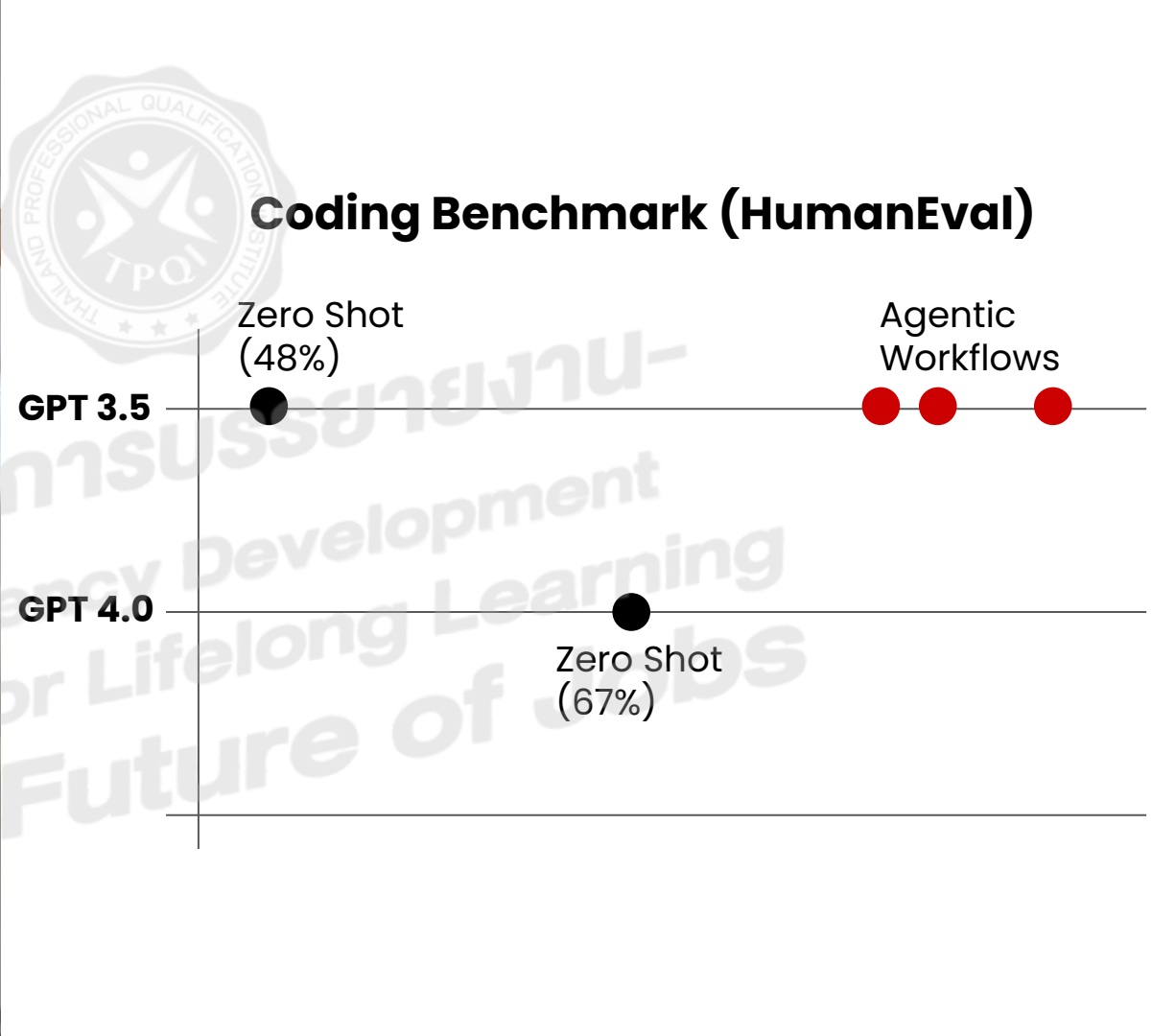
Do you need any **web research**?

Write a first draft

Consider what parts **need revision** or more research

Revise your draft





Agentic Reasoning Design Patterns

1. Reflection
2. Tool use
3. Planning
4. Multi-agent collaboration

Agentic Reasoning Design Patterns

1. Reflection

2. Tool use
3. Planning
4. Multi-agent collaboration



Please write code for {task}

```
def do_task(x): ...
```

```
def do_task_v2(x):
```

```
def do_task_v3(x):
```

Coder Agent
(LLM)

Reflection

There's a bug on line 5. Fix it by ...

It failed Unit Test 3. Try changing ...

Critic Agent
(LLM)

AI in Thailand



1. Key Applications
2. AI Education
3. Momentum





3 Key Points



**Coding is a
very
important
skill**



Change is a
good thing



Always
Learning
New Things



What We Learned Today

The Key to AI

- Always learning
- Augmentation vs. Automation
- The Future is AI (100%)
- The Best Prompt is “Teach Me”
- AI can help us learn new things very quickly



The Future of AI

Unlearn to Relearn in the age of AI