

The background features a grid of squares in shades of blue and red. Overlaid on this grid are numerous 3D cubes of varying sizes and colors (blue, red, and white), some of which are stacked or arranged in a way that suggests a staircase or a series of steps. The lighting is soft and directional, creating subtle shadows and highlights on the cubes and the grid.

Elsewhen

# Generative AI

## A paradigm shift in enterprise opportunities

## Embracing an incredible new technology...

Welcome to this document, where we'll explore the exciting potential of Generative AI technology. Our goal is to provide you with a high-level introduction to this groundbreaking approach & highlight the opportunities it creates.

With Generative AI, we're witnessing a paradigm shift that demands early attention from forward-thinking organizations. Those who embrace this technology stand to benefit from significant increases in efficiency, revenue, and market share.

\* images in this deck have been created with Generative AI

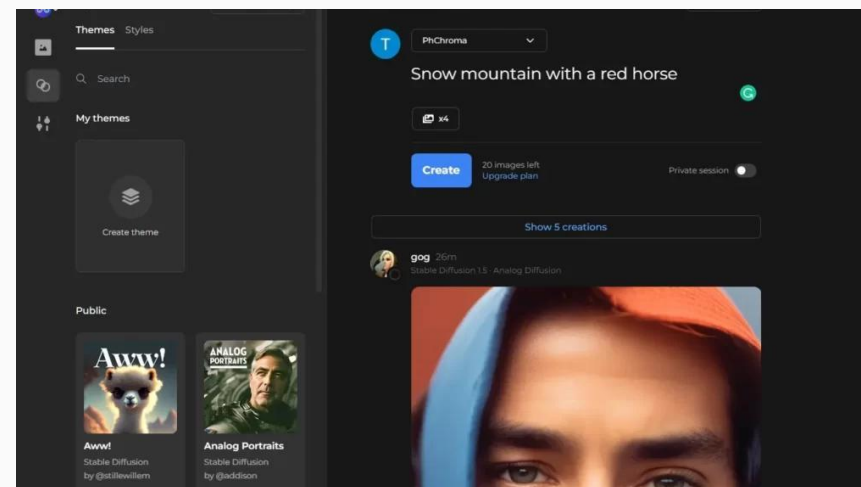
# Talk to us today to understand how Generative AI can transform your business



**FREE**

## Join us for a 1 hour GPT workshop

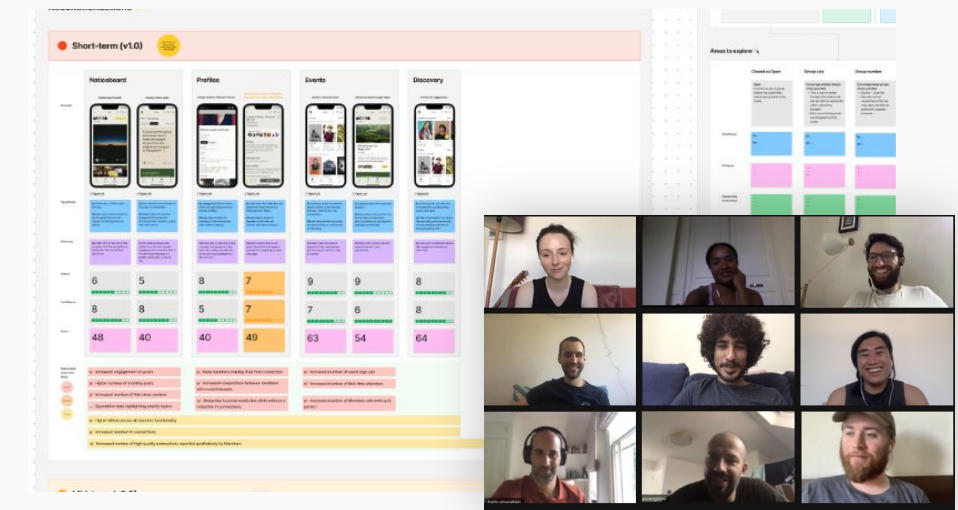
See a live demo of the concepts explained in this doc and their application to your industry.



**£7K**

## Get a 3 day GPT transition evaluation

Deep dive into your department or business unit to come up with potential use cases. Help your team and stakeholders to decide together on the best candidates for experimentation. Gain an understanding of what it will take to run the chosen experiments to validate your assumptions.



**£25K**

## Run a 2 week GPT sprint with an Elsewhen team

Run with your dedicated Elsewhen team an AI prototyping sprint. You will direct our team to break down an opportunity, build a prototype experiment, test it with users and stakeholders to gain an understanding of potential ROI to your business.

Why now?

# What you can do today

## Integrate

Integrate chatgpt to improve any customer facing interface to drastically increase nps.

## Create

Create a chatgpt plugin to provide your apis and company data integration with chatgpt to increase revenue and build entirely new business line

## Use

Utilised autonomous agents to significantly reduce operational complexity cutting down process from days to minutes to increase productivity of back and front office tasks

## Train

Train models on your organisations data to create entirely new platform for narrow use case that transforms your business to be AI first

### Some examples



#### Morgan Stanley

GPT 4 model powers an internal-facing chatbot that performs a comprehensive search of wealth management content and effectively unlocks the cumulative knowledge of Morgan Stanley Wealth Management.



#### Stripe

The team put together a list of 50 potential applications to test GPT-4; and after vetting and testing, 15 of the prototypes were considered strong candidates to be integrated into the platform, including support customization, answering questions about support, and fraud detection.



#### Zahid Khawaja

Created an autonomous AI agent that conducts product research and writes a summary on the best headphones.

What is available  
today?

## Understanding the key terms

### LLM

Large Language Model, which is a type of artificial intelligence system that is trained to generate or understand natural language text. Essentially, an LLM is designed to imitate human language patterns and can be used for a variety of purposes, such as language translation, text generation, and sentiment analysis.

### GPT

Generative Pretrained Transformer, which is a type of language model developed by OpenAI. The GPT model is trained on a large corpus of text data and can generate coherent text based on a given prompt. It can be used for a variety of applications, such as text generation, question answering, and text classification.

### Chat GPT

Is a specific implementation of the GPT language model, designed for conversational AI. It is trained to generate human-like responses to questions, and can be used to build chatbots and virtual assistants. The goal of ChatGPT is to enable seamless and natural human-like conversations between people and AI



# API

## Introduction

- The **OpenAI API** enables developers to access the powerful GPT technology and integrate it into their applications, products, and services.
- It supports various tasks, including natural language processing, translation, summarization, and more.

## Architecture

- The API connects your application to **OpenAI's cloud-hosted GPT model**.
- Simply send a request with the input text and desired task parameters.
- The API processes the request and returns a generated output that can be used in.

One example of how you could use the OpenAI API is to build a chatbot for customer service. You could use the API's natural language processing capabilities to understand customers' questions and respond with helpful answers. By using the OpenAI API, you could provide a more personalized and effective customer service experience, without needing to develop your own AI models from scratch.

```
bash
$ curl -s -u :$OPENAI_API_KEY -H 'Content-Type: application/json' \
  https://api.openai.com/v1/completions -d '{
  >   "model": "davinci",
  >   "temperature": 0,
  >   "stop": "\n",
  >   "prompt": "Q: What is human life expectancy in the United States?
  \nA: Human life expectancy in the United States is 78 years old.
  \nQ: What is the meaning of life?\n"
  > }' | jq
{
  "id": "cml-RRcXqSMfadADL1tst9gxPTJ9",
  "object": "text_completion",
  "created": 1591865181,
  "model": "davinci:2020-05-03",
  "choices": [
    {
      "text": "A: The meaning of life is 42.",
      "index": 0,
      "logprobs": null,
      "finish_reason": "stop"
    }
  ]
}
```



# Plugins

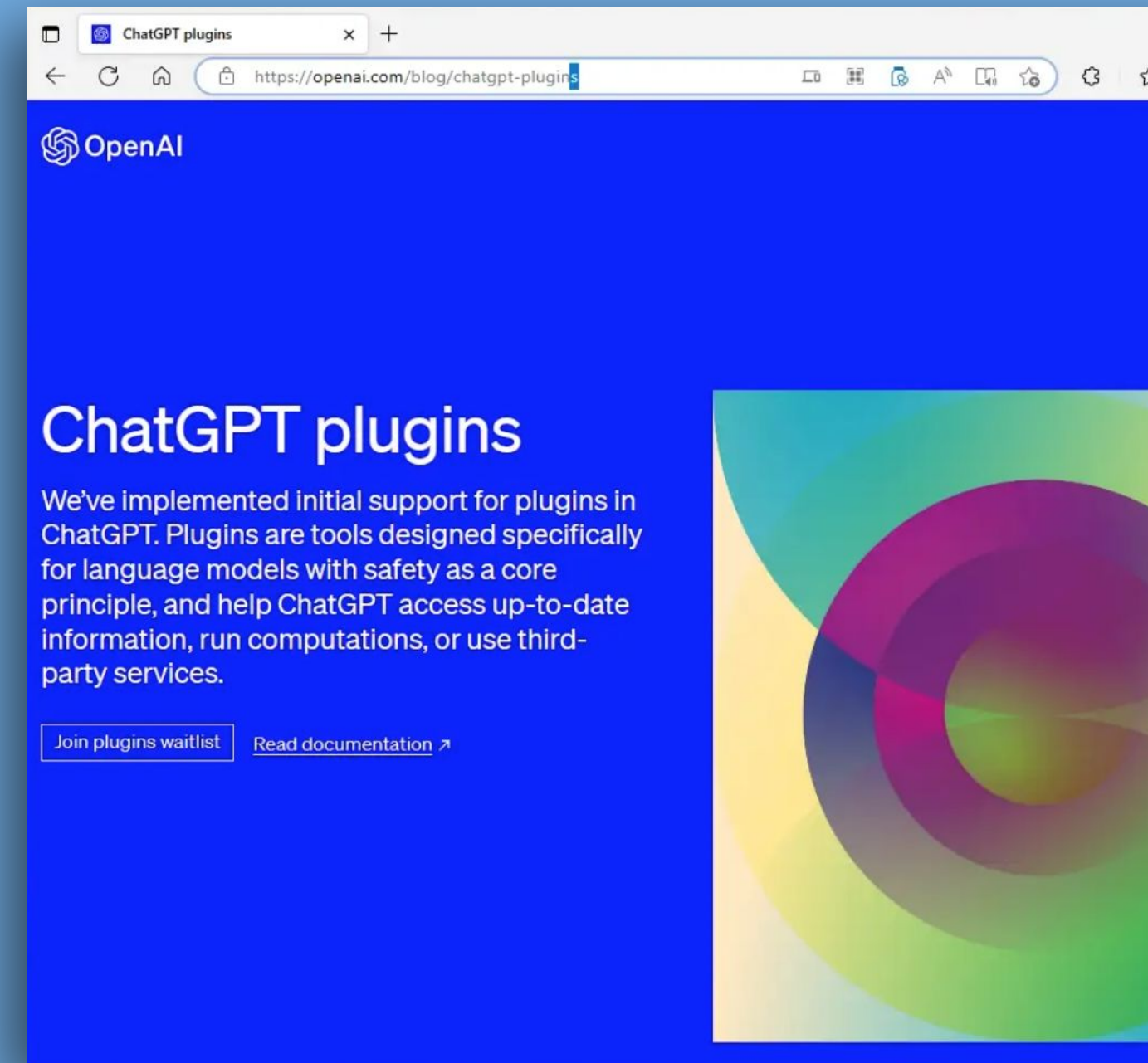
## Introduction

- Creating a custom plugin allows you to harness GPT technology in a way that's tailored to your specific platform or tool, ensuring seamless integration and a user experience that aligns with your product.
- By building your own plugin, you can control the features and functionalities you want to offer, maximizing the value of GPT technology for your users.

## Architecture

- Develop the plugin using your preferred programming language and framework, incorporating the OpenAI API to access GPT models.
- Design the user interface and interaction flow to ensure a smooth integration with the target platform or tool.
- Package the plugin for easy installation and distribution, allowing users to configure it with their OpenAI API key and start using the GPT-powered features.

One example of building your own OpenAI plugin is to integrate AI-powered image recognition into your image editing software. You could use the OpenAI API to train a custom image recognition model based on your specific needs, such as identifying certain types of objects or analyzing image quality. You would then build a plugin using the software development kit for your image editing software that communicates with the OpenAI API to send images for analysis and receive results. By building your own plugin, you could provide powerful image recognition capabilities within your own software, without needing to develop AI models from scratch.



# ChatGPT Plugins (alternative)

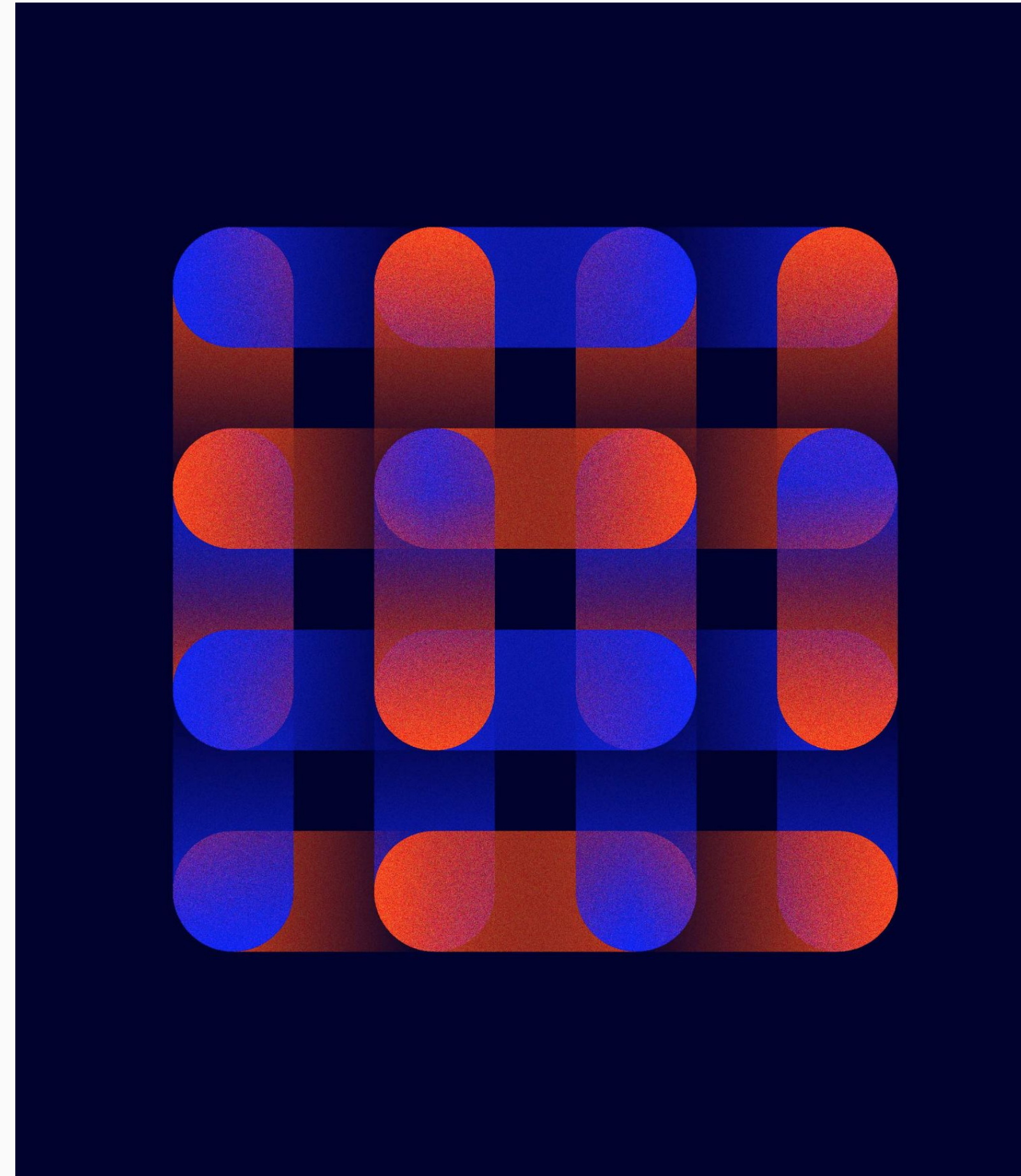
## Introduction

ChatGPT Plugins, a recent addition to OpenAI's ChatGPT ecosystem, enable third-party integrations through a natural language interface. This significant milestone presents opportunities and challenges for various market players, including first-movers, data-powered brands, and tech giants, as they navigate the rapidly evolving AI landscape.

## Architecture

ChatGPT Plugins act as a conduit between ChatGPT and external services, allowing users to interact with multiple brands simultaneously through the ChatGPT interface. The Plugins' architecture involves API endpoints and manifest files to define functionality. Businesses allow ChatGPT to consume and call their APIs, opening their services up to OpenAI's 100m users.

OpenAI Co-founder Greg Brockman demonstrated the power of ChatGPT Plugins in a recent Ted Talk, where he generated meal ideas using ChatGPT, created photorealistic imagery with DALL-E, automated grocery delivery through Instacart, and used Zapier to create and send a tweet about the process. This seamless integration showcases the significant shift ChatGPT Plugins bring to the digital world.



# Train your own LLM

## Introduction

Apply LLM to your business at scale. Take advantage of a unique proprietary data set to create a model that can provide value to specific set of customers and requirements currently not met by existing solutions in the market. This is a more time and resource intensive route that will generate unique IP and provide full control over data and model.

## Architecture

- Develop your own large language model on the basis of a 3rd party pre trained models from the likes of AI21 Labs, Anthropic and Stability AI. Or train a completely unique model using your own and/or publicly available data.
- Host the 3rd party model on AWS Amazon Bedrock or Replicate. You can create your own cloud hosting with AWS, GCP or Azure if required.
- Interface with the model using custom API or UI.

Suppose a large enterprise has a complex supply chain that involves multiple supplier, manufacturers, distributors, and retail outlets. The company wants to use AI to optimize the supply chain and reduce costs. The data is proprietary to the organisation and the solution is not currently available on the market.

A solution for this scenario could involve the use of reinforcement learning algorithms to model the supply chain and optimize it for cost and efficiency. However, this would require a sophisticated AI system that can handle large amounts of data and make decisions in real-time, while also considering a wide range of constraints and objectives. Additionally, the system would need to be robust and resilient to failures, such as supply disruptions or unexpected demand spikes.



# Fine tuning

## Introduction

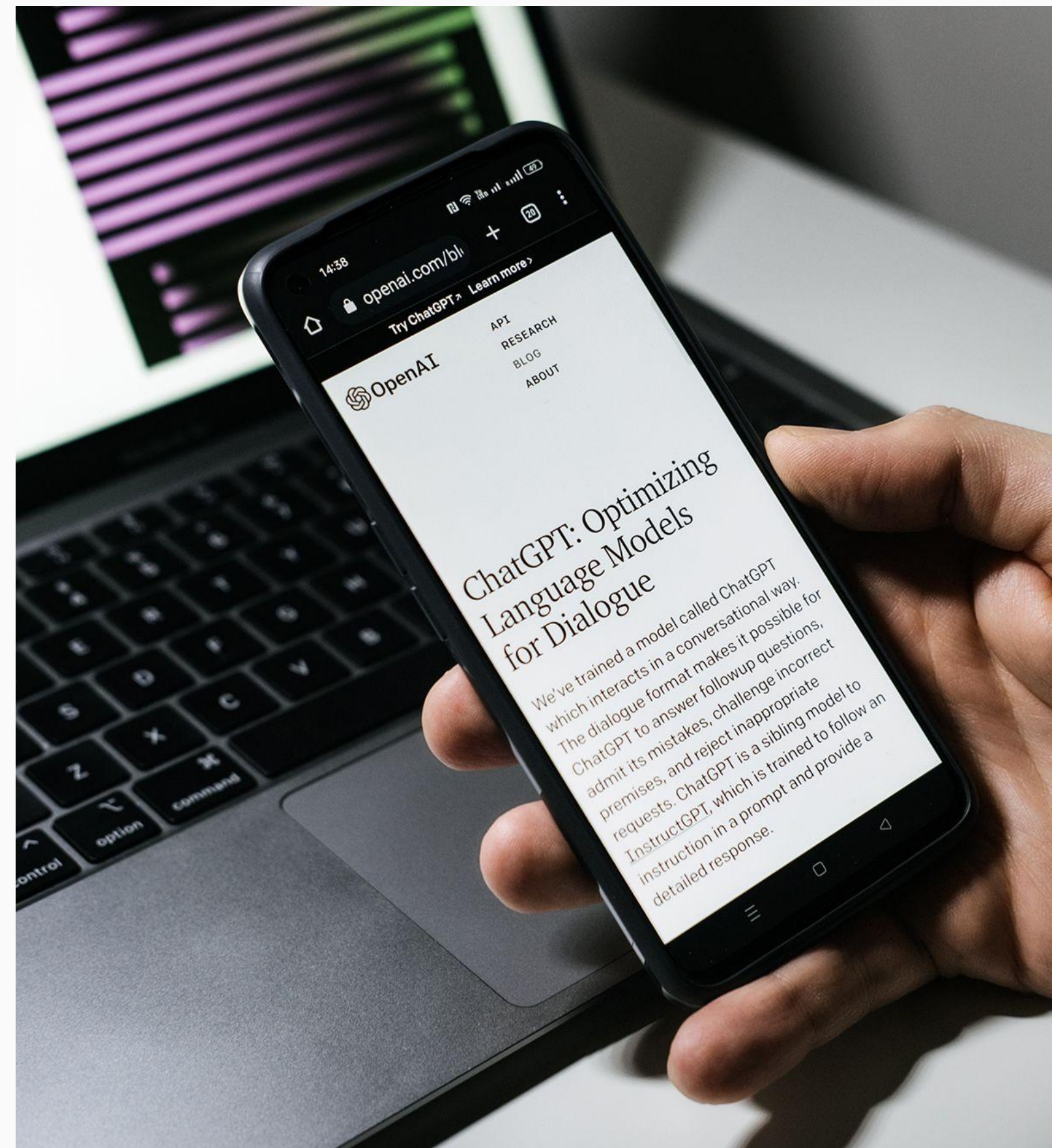
- Fine-tuning is the process of training a pre-trained model like GPT on a specific dataset to improve its performance on a particular task or domain.
- Fine-tuning allows GPT to generate more accurate and relevant text for specific use cases, industries, or businesses

## Process

- GPT is first pre-trained on a large dataset, learning general language understanding.
- Preparing the dataset: Before fine-tuning, it's essential to curate a domain-specific dataset that is relevant, clean, and representative of the desired task or industry.
- Fine-tuning involves training GPT on a smaller, domain-specific dataset, which enables the model to better cater to specific tasks or industries.

**EleutherAI** — an independent research organization, fine-tuned GPT-3 on scientific texts to create a version that was better suited to answer questions in the scientific domain. This fine-tuned model, named EleutherAI GPT-3, demonstrated improved performance in generating accurate and contextually relevant responses to science-related queries.

**LegalTech** — A legal technology company used fine-tuning to adapt GPT-3 for generating legal documents. The company trained GPT-3 on a dataset of legal texts, allowing the model to better understand legal language and terminologies. As a result, their AI-powered tool can draft legal documents, such as contracts and agreements, with improved accuracy and speed.



# Known paradigms

# Prompting

## Introduction

Prompting refers to the process of providing an input or a query to the language model in order to obtain a desired response. Prompts are essentially the starting point for any interaction with ChatGPT, serving as the trigger for generating contextually relevant, coherent, and useful responses

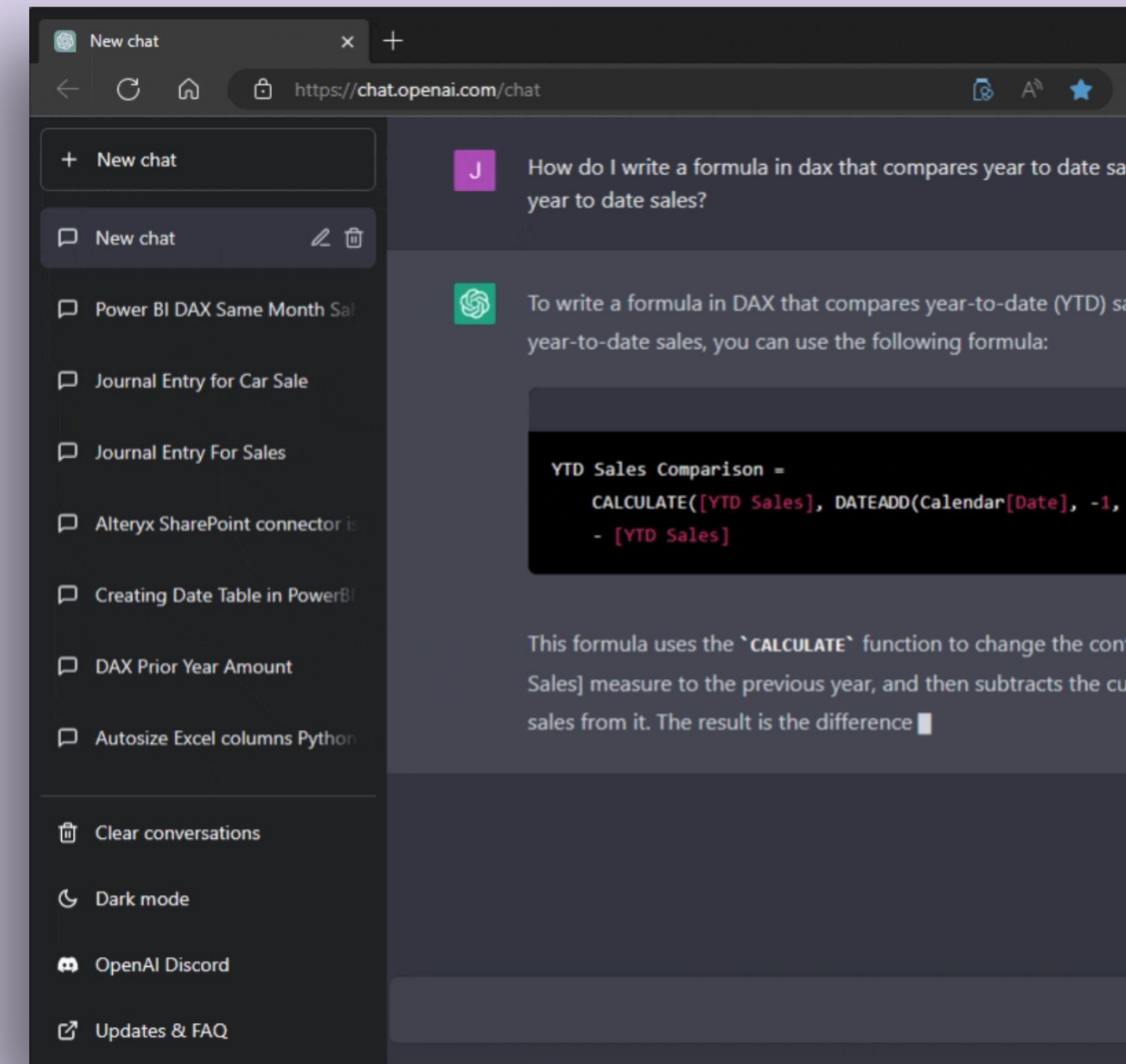
## Architecture

Prompts can be simple, like asking a question or providing a statement, or they can be more complex, involving specific instructions and desired formats for the generated output. By carefully crafting prompts, users can guide ChatGPT to deliver tailored responses that align with their specific needs, goals, or conversational styles. Prompts can be sequentially layered to guide the AI to output specific responses.

Let's say you are a business analyst working for a company that wants to expand its product offerings. You can use ChatGPT to gather insights on potential market opportunities or trends by providing a well-structured prompt.

**Prompt:** "Analyze current market trends in the consumer electronics industry and suggest 3 potential product opportunities for our company to explore."

By specifying the industry (consumer electronics) and the number of suggestions (3), you guide ChatGPT to generate a more focused and relevant analysis.



# Co piloting

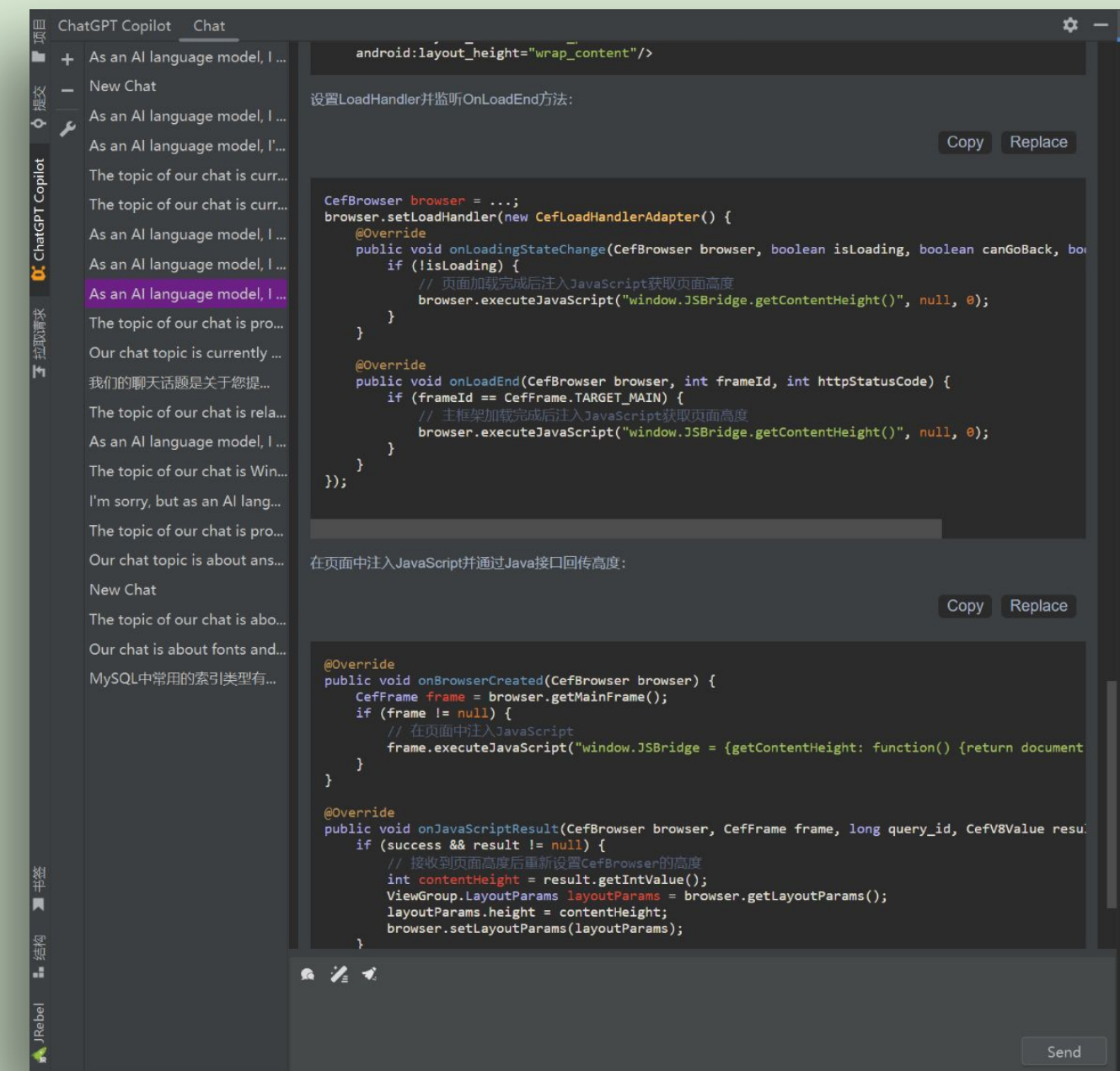
## Introduction

Co-piloting is the collaboration between a human and an AI model to achieve a goal or complete a task. The AI model acts as a co-pilot providing suggestions, information, or completing parts of the task based on the user's input. This can include drafting emails, writing code, or assisting with problem-solving. Co-piloting leverages the AI's capabilities to enhance human productivity and decision-making while ensuring the human user maintains control over the final outcome

## Architecture

- Human-AI interaction: Enables smooth communication between the user and AI, with intuitive interfaces that allow users to provide inputs, ask questions, and receive AI-generated responses.
- Context-awareness: The AI model's ability to understand and adapt to the context of a given task, providing relevant suggestions.
- Modular design: Allows for easy integration of specialized AI models or components tailored to specific tasks, enabling the co-piloting system to handle a wide range of applications.
- Continuous learning: The AI model's ability to learn and improve over time, incorporating user feedback and new data
- User control: Ensuring that users have control over the AI's actions and outputs, allowing them to make the final decision or modifications as needed.

Visual Studio Code & GitHub Copilot: Visual Studio Code, a popular code editor, has integrated GitHub Copilot, an AI-powered code completion tool built on OpenAI Codex. By leveraging Copiloting, developers using Visual Studio Code can receive context-aware code suggestions in real-time, helping them write code more efficiently and with fewer errors.



# Autonomous agents

## Introduction

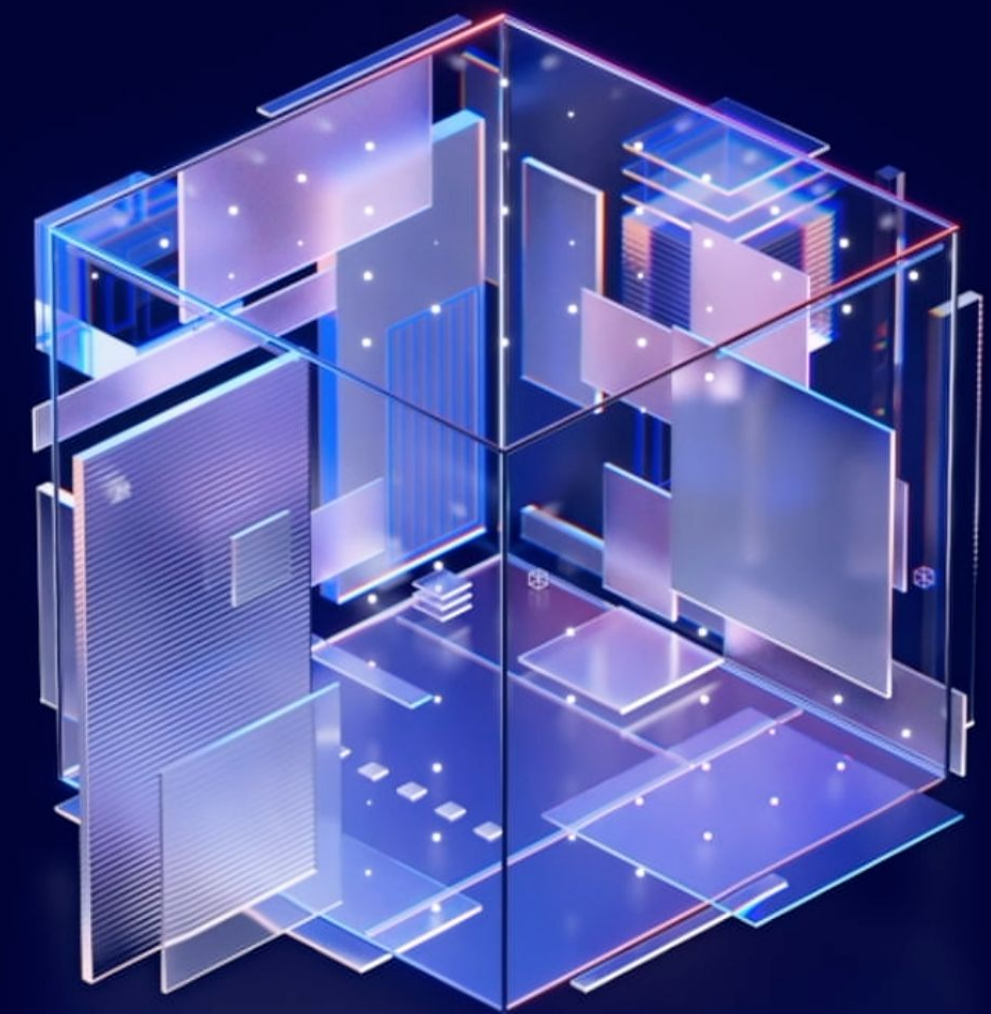
The advent of AI agents marks a significant breakthrough in artificial intelligence, as developers globally harness large language models (LLMs) like GPT-4 to tackle intricate challenges autonomously. These advanced agents pave the way for transformative LLM applications across diverse sectors, including finance, retail and telecoms.

## Architecture

AI agents such as Auto GPT and BabyAGI use traditional software interfaces to direct LLMs toward set goals. Recursive agents generate and execute tasks systematically, leveraging plugins for web browsing, external memory, and more to optimize performance. Continuous enhancements include parallel task handling, code generation, and robotics integration.

**BabyAGI**, developed by Yohei Nakajima, is an early autonomous agent serving as an AI task manager. Originally built for automating VC tasks, it was later simplified and shared on GitHub. Enhancements include moderation, parallel task handling, agent generation, and code-writing and robotics integration.

**Auto-GPT**, created by Toran Bruce Richards, is a GPT-4-based agent proficient in structured web searches, subtask creation, and launching agents for task completion. It also writes, debugs, and self-improves its code.





What to do next

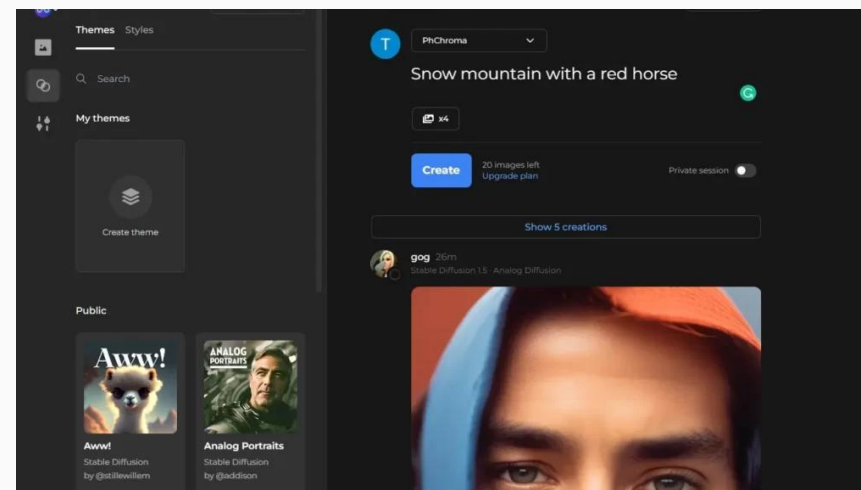
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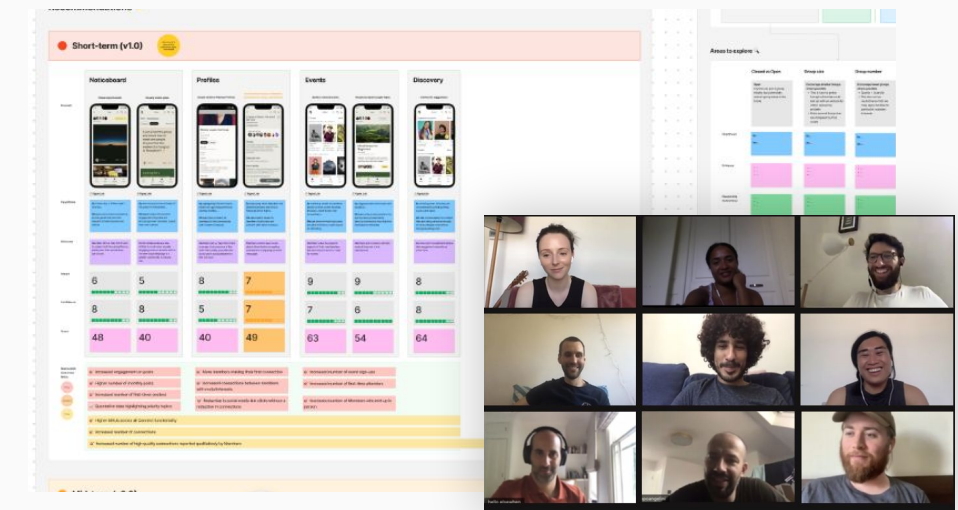
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# Thank you

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