

# Generative AI has Arrived:

Essential Knowledge for TTOs

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Image courtesy of DALL-E 2

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## WHAT IS AI?

Does work that traditionally  
requires humans

Machine learning

Deep learning

Neural networks

Big data



This is from \*2015\*

Where are we on this line now?

What happened to cause the turn?

What is coming?

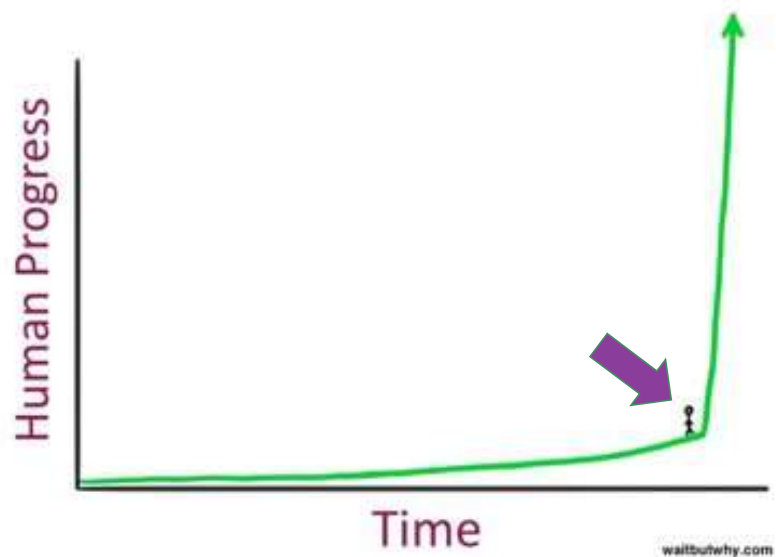
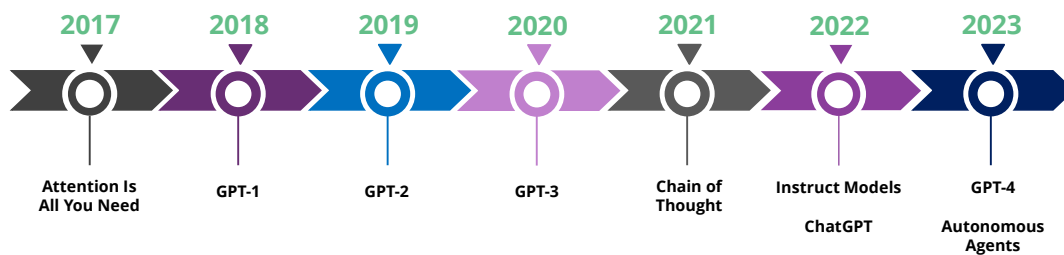


Image <https://waitbutwhy.com/2015/01/artificial-intelligence-revolution-1.html>

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## A Brief History of Generative AI



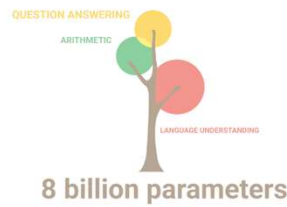
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### Generative AI is **NOT**

- Conscious
- Unbiased
- Human replacement
- Inherently evil

### Generative AI **IS**

- Sophisticated auto-complete
- Data and human training
- A little surprising to creators!
- Full of emergent behaviors



<https://ai.googleblog.com/2022/04/pathways-language-model-palm-scaling-to.html>

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## How do we get the most out of AI?

Specific tools for some specific tasks

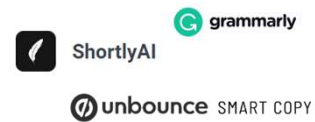
#### AUDIO ↔ TEXT



#### IMAGE MANIPULATION



#### WRITING SUPPORT



## How do we get the most out of AI?

Generic approach for others!

Translate

- Read and write effectively in most languages

Summarize

- Reduce long content to single paragraph or key points

Understand

- Get intent, meaning, tone, and more

Create

- Generate new content with your knowledge

Refine

- Editing, suggested changes for greater impact



## 3 Levels of AI Usage

### INSTRUCT

Direct AI to perform specific tasks.

Provide clear instructions and receive immediate results.

AI acts as a tool, executing predefined tasks on demand.

### CHAIN

Chain prompts together to simulate cognitive processes.

Engage in dynamic conversations with AI.

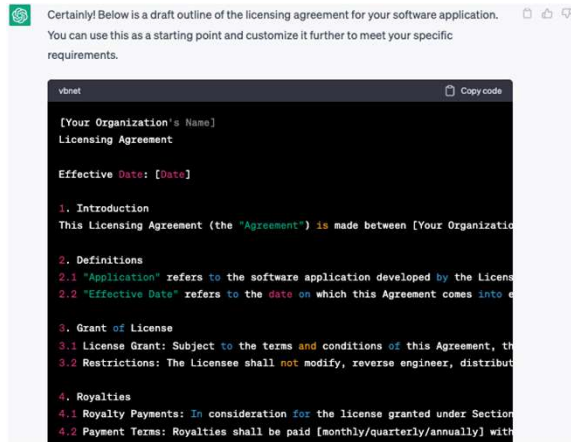
Explore and iterate on ideas by building upon previous interactions.

### AUTOMATE

Create autonomous AI agents for background tasks.

Delegate specific tasks to AI while focusing on other activities.

Enhance productivity by leveraging AI as a proactive assistant.



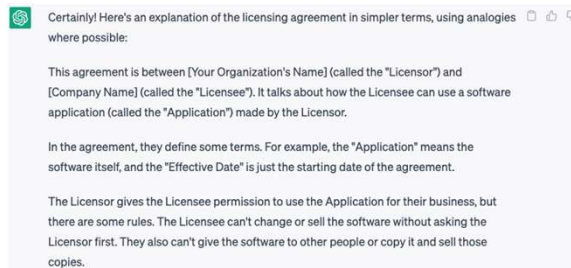
## Write Draft of Licensing Agreement

Provide GPT with basic info

Generate draft contracts

Structure contracts with key sections efficiently.

Refine drafts with legal review for accuracy



## Rewriting Contracts in Plain Language

Simplify contracts for better stakeholder understanding.

Translate legal language into plain, accessible terms.

Improve communication and clarity of contract terms.

Certainly! Here's a draft of the grant proposal for your research project on developing a medical device for non-invasive diagnosis of cardiovascular diseases:

**Abstract:**

This grant proposal outlines a research project aimed at developing an innovative medical device for the non-invasive diagnosis of cardiovascular diseases. The project will focus on utilizing advanced signal processing algorithms, machine learning techniques, and data analysis to enable early detection of cardiovascular conditions. By emphasizing the significance of early detection and the potential impact on improving patient outcomes, this research aims to revolutionize cardiovascular diagnostics and contribute to enhanced healthcare outcomes.

**Introduction:**

Cardiovascular diseases remain a leading cause of morbidity and mortality worldwide. Early detection of these conditions is crucial for timely intervention and effective management. However, existing diagnostic methods often require invasive procedures, which can be uncomfortable, costly, and carry certain risks. Therefore, there is a pressing need for a non-invasive diagnostic tool that can accurately and efficiently detect cardiovascular diseases.

## Write Grants

**Analyze:** AI assesses research objectives, project details, and eligibility criteria.

**Draft:** Generate grant application drafts with ChatGPT's assistance.

**Outline:** Assist in outlining proposed research, significance, and expected outcomes.

```

Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PowerShell

PS C:\Users> python -m autogpt --continuous
WARNING: Continuous mode is not recommended. It is potentially dangerous and may cause your AI to run forever or carry out actions you would not usually authorize. Use at your own risk.
Welcome back! Would you like me to return to being AutoGPT-Devo?
Continue with the last settings?
Name: AutoGPT-Devo
Help: an AI designed to teach me about auto gpt
Goal: [Research auto gpt], 'find the github and figure out what th
e project is', 'explain what auto gpt is in a file named autogpt.t
xt'.
Continue (y/n): y
Using memory of type: LocalCache
AUTOGPT-DEVO THOUGHTS: I think the first step should be to use th
e 'google' command to search for 'Auto GPT'.
REASONING: This will help us gather more information about Auto G
PT and we can proceed with identifying the relevant GitHub project
URL.
Use 'google' to search for 'Auto |

```

## Technology Scouting and Matching

Identify emerging technologies for commercialization opportunities.

Analyze patents, research papers, and market data.

Match technologies to industry needs for collaborations.

## The Future of AI: What's coming next?



- We're still very early in this latest generation of AI products and seeing extremely rapid development of both the tech and the way to leverage it
- Experts are proving to be terrible at predicting how fast things are coming
- Responses by governments and other regulatory bodies are coming, but tend to be unable to keep up


## But what about...

**RISKS**

**ETHICS**

**BIAS**

- Can I trust the results?
  - It depends!
- Does my input get shared with others?
  - Increasing clarity on this
- What impact do these technologies have on society?
  - Numerous concerns, limited knowledge
- Do I know what influences these tools?
  - Training processes and materials are not transparent
- So what can I do? Is opting out a choice?




## What to do next?

- Find a way to experiment! ChatGPT is a great place to start
- Make using these tools a regular part of your daily activity
  - Work and personal
- Keep consuming content like this to stay informed

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## Questions?



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