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The Road to AGI

Follow major steps taken towards building artificial general intelligence

Issue #4
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A Message From the Editor

Having the opportunity to dive into the newest AI technologies every day, exploring the revolutionary developments in the space that seemingly happen every day has been exhilarating in itself. However, being a part of AI Core, being connected with readers and audience members from our workshops gives purpose to the technology. What Artificial Intelligence is going to evolve into isn’t about the science or math required for it to work, but about the people that it empowers – the people that connect over it, the conversations it sparks, and the people we share it with. I am incredibly excited to introduce this month’s edition of The Prompt and for AI Core’s future in connecting humanity through AI.

Enjoy!

Jackson Grove
Editor & AI Engineer
About AI Core

AI Core is a unique student engagement program at the University of Arizona that is creating jobs in the realm of Artificial Intelligence by employing students and pairing them up with real-world, early prototype and exploratory projects.

How it works:

Industry sponsors or UArizona faculty bring a project or challenge to the AI Core where our growing workforce of student employees are constantly exploring and developing with cutting-edge AI products, platforms, and techniques as they emerge from industry. In 2024 that means GPT development with OpenAI, Llama 2 for chatbots, and tools like Adobe Firefly, Runway.MI, Blockade Labs and more for media and XR.

Our teams function in a hybrid, post-pandemic, work environment. Our physical office, a workspace we call “The Bench” is home to 8 in-person workstations and program leadership. But online via Discord our numbers swell 10X. In Summer of 2024 we are anticipating the AI Core Summer Internship (in partnership with the University of Arizona’s Student Engagement & Career Development) to swell to almost 70 students!
Public Workshops in 2024!

The AI Core also holds regular, free-to-the-public workshops in AI at the CATalyst Studios on the University of Arizona campus. Held on Tuesday evenings from 5:30 - 7:00, plan on meeting other AI enthusiasts and learning the latest techniques and insights from our AI Core student workforce. Why not grab a meal on the gorgeous University of Arizona campus while you’re at it? Workshop topics feature Generative AI for Marketing, Navigating the GPT Store, and new discoveries as we make them.

Register online at
https://events.trellis.arizona.edu/en/f44lNu67/ai-core-spring-workshops-5a3U6R216nM/overview

Spring Workshop Schedule:

Tuesday, February 13: 5:30pm – 7:30pm – Data Studio

Tuesday, March 5, 5:30pm – 7:30pm – Data Studio

Tuesday, March 26, 5:30pm – 7:30pm – B252/254 (large room next to the Data studio)

Tuesday, April 16, 5:30pm – 7:30pm – Data Studio

Tuesday, May 7, 5:30pm – 7:30pm – Data Studio
HeyGen Custom Avatars

Clone yourself in an AI-generated video.

HeyGen can train an AI model to produce videos of you talking, emulating your voice, facial expressions and gestures.

1. Navigate to HeyGen and select Instant Avatar, then select Create Instant Avatar.

2. Follow the instructions to record your video and train your avatar.

3. Wait for the avatar to complete training then create your video!
OpenAI Sora

The dawn of a revolution in AI-generated video technology.

OpenAI’s revolutionary announcement of Sora, their new video model, is an incredibly massive leap in AI-generated video technology.

Not only will this lead to confusion in our digital information sphere about concerning what is real, but it will empower humanity to transform our creations, expediting innovation.

The model is not yet available to the public but upon its release it will revolutionize the ways in which we both create and consume digital information.

A comparison of AI-video models over the last month.

Google Lumiere
Jan 24, 2024

OpenAI Sora
Feb 15, 2024
BREAKING NEWS: Cognition AI Devin

The world’s first AI Software Engineer.

Cognition AI’s announcement of Devin, the world’s first software engineer, is an incredible leap in autonomous AI agents towards the road to AGI.

Devin has access to a shell, code editor, and browser within its own compute environment, allowing it to create everything from end-to-end apps to its own AI models.

Devin is not yet available to the public but upon its release it will revolutionize the ease in which we can create software and bring our ideas to life.

The interface of Devin showcasing its capabilities.

Devin’s Workspace allows it to create games, debug code, train AI models, add features to programs, build off of open source software and more.
GPT Store
The hub for all custom GPTs.

1. Navigate to ChatGPT and open the GPT Store.

2. Search for what you are trying to achieve
GPT Spotlight: Video Maker - by invideo AI

A powerful tool to generate videos from a document in just minutes.

1. Go to VideoMaker - by invideo AI.

2. Upload a document or describe an idea. The more content it has, the better.

3. Allow the GPT to talk to invideo AI.

4. Click the link to invideo AI, wait for the video to generate, then watch the finished result!
New to ChatGPT: GPT Mentions

Leverage the powers of GPTs from the GPT Store in any chat.

1. Open ChatGPT and, using the sidebar, click Explore GPTs to navigate to the GPT Store
   https://chat.openai.com

2. Choose a GPT, click to create a chat with it, then say something to start the chat
   NOTE: Starting a chat saves it to the sidebar to be mentioned later

3. Create a new chat or navigate to an existing one

4. Use the ‘@’ symbol to mention the GPT and use its powers in the chat

You can also use multiple GPTs in the same chat!
INSANE DEMO OF THE MONTH

Generating startup ideas with GPT mentions

1. Open ChatGPT and ask the base model to generate 10 startup ideas.

2. Use the ‘@’ symbol to mention a business expert to narrow down and evaluate our ideas.

3. Mention a domain expert to refine the idea.

4. Create a pitch by mentioning videoMaker by invideoAI.

We created a startup pitch video from our GPT conversation in just a matter of minutes!

https://www.google.com/url?q=https://youtu.be/qBtyKkHWPe8&source=gmail-imap&ust=1709683959000000&usg=AOvVaw3ngFsHlPB8r15TksDgPLYuR

https://chat.openai.com/share/3fb3a17d-fb39-4a78-8d7d-f6886c747a01
NVIDIA Foundation Agent
AGI integrated into our physical world

Newly announced by Dr. Jim Fan, NVIDIA’s Lead of AI Agents Initiative, NVIDIA’s AI research labs will be setting their focus towards building the Foundation Agent. Dr. Fan describes how many leading-edge AI systems focus on specializing their skills towards narrow domains and tasks but few are able to perform multiple skills well. Another limitation is the lack of embodiment of these models, only being able to control the agent it was trained on, lacking the capabilities to navigate through different realities, controlling new agents with different capabilities in new and unseen environments. The Foundation Agent would be a combined solution to these limitations, offering a generalizable skillset with the ability to operate in multiple realities – possessing high levels of both skill and embodiment. It has been proposed that the capabilities of the Foundation Agent will extend to AI agents operating in different virtual environments as well as in the physical world, providing the cognitive basis for how they make decisions and navigate their surroundings.

Following this same trend, Jenson Huang, the CEO of NVIDIA, announced its project GROOT, an initiative to extend the capabilities of the Foundation Agent into the physical world through NVIDIA-made humanoid robots. The Foundation Agent will be uploaded onto the robots, providing the AI functionality to interact with physical objects. This project is still in development, however, several prototypes have already been made. Continued progress in the space of humanoid robots shows signs of quick integration of AI into the physical world once NVIDIA's Foundation Agent has been achieved.

Figure 01 Robot
The “AGI Robot” powered by GPT-4

Figure, an AI startup, has been developing humanoid robots, using OpenAI's GPT-4 to power their cognition. Figure released a video showcasing the abilities of their Figure01 robot, shocking the industry. The robot has a great level of dexterity and was shown to perform tasks as complex as putting away dishes, picking them up successfully, identifying the correct place for them in the drying rack, and explaining its thought process behind its decisions in real time.
OpenAI Watermarks Their Products
Countering deception from AI-generated content.

With the eminent release of generative AI image and video models capable of creating hyperrealistic content, many debates have sparked around how best to preserve the integrity of our digital information landscape, and which policies will help us in not being fooled by AI-generated content. Recently, in light of these discussions, legislation and policy has been enacted to protect against this kind of deception.

OpenAI has enacted a new watermark policy for their DALL-E 3 image model, which was also announced to be applied to Sora upon its release. This watermark will make content easily identifiable as AI-generated, being housed in the metadata of any AI imagery and video generated with OpenAI products. However, this method is not a “silver bullet”, as OpenAI puts it, to AI-induced deception as there are many possible workarounds to this policy, allowing individuals to possess and distribute AI-generated images without watermarks. It is, however, a start to regulating and protecting the integrity of the digital information made available to us.

FCC Bans AI-Generated Voice in Robocalls
Putting an end to AI-generated voice scams.

In recent months there has been an uptick in AI-generated voices used in scam calls, being used for everything from automation to impersonating loved ones and manipulating victims’ emotions. The Federal Communications Commission (FCC) has enacted a policy as a response to this trend, making AI-generated voices in robocalls illegal. This has implications that span further than the initial problem but the hope is that it will allow for smoother prosecution, putting an end to AI-generated voice scams.
Text to Image Generation

Adobe Firefly Image 2

Great for getting started creatively and making a vision from your Mind's Eye come to life.

Best Workflow: ChatGPT x DALL·E 3 or Firefly

1. Open Adobe Firefly at firefly.adobe.com and click Text to Image on the bottom left (or alternatively use the text box on the landing page).

2. Type what you would like generated, then press Generate.
3. You’re all done! Tweak the settings on the sidebar to the right for different styles and effects.

Try generating photos too!
Text to Image Generation

Bing Image Creator

Great for getting started creatively and making a vision from your Mind's Eye come to life.

Best Workflow: ChatGPT x DALL-E 3 or Firefly

1. Open Bing Image Creator at bing.com/create and create an account if you don’t have one already.

2. Type what you want generated and hit Create. With this model you can really be descriptive.
3. See your results!
Character Creation

Creating Characters with ChatGPT & DALL·E 3
Great for maintaining brand identity and fine-tuning an image to keep specific elements while adding new details.

Best Workflow: Keep your original prompt handy, upload the reference image, and tell ChatGPT to specifically use the reference image.

1. Open ChatGPT at chat.openai.com and create an account if you don’t have one already. You will need the paid ChatGPT Plus plan for this.

2. On the top of the sidebar click Explore. You will be seeing a list of custom pre-prompted GPTs made by OpenAI. Scroll down and click on Hot Mods.

Hot Mods
Let's modify your image into something really wild.
Upload an image and let's go!
3. Upload one or more images to the Hot Mods GPT and ask it to alter your image.

4. Watch ChatGPT prompt DALL-E 3 autonomously and generate your image reimagined.