University of Arizona | AI CORE

AMAZING NEW AI CORE PROJECT

ENDLESS POSSIBILITIES WITH WEB XR!

VIBE CODING AND CHAT GPT IMAGE GEN

WE EXPLORE THE NEW BUZZ AND SEE WHAT ALL THE HYPE'S ABOUT

Z INCREDIBLE AI TOOLS

FREE TOOLS FOR CODING & VIDEO CREATION

BIOSPHERE 2 COLLAB

220+ STUDENTS CHALLENGED TO USE

AI TO FIGHT CLIMATE CHANGE

ISSUE #13 APRIL 2025



THE UNIVERSITY OF ARIZONA Institute for Computation & Data-Enabled Insight

MEET THE TEAM!



Tyler Green

Designer & Al Content Creator

Over these past few months, you may have noticed some changes to the look of The Prompt. Well, guilty as charged! AI can seem pretty scary sometimes, and my goal has been to present it in a way that feels like you're chilling with a good friend and excitedly considering the possibilities it could offer. To me, that's what the Prompt is: a place of unbridled curiosity, discovery, and support.



Jackson Grove Editor & Al Engineer

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.

ADDITIONAL CONTRIBUTORS

Ralf Sepulveda Writer **Amanda Harrell** Coordinator Kashyap Nadendla Web Developer

Pieces of The Prompt are created with the help of AI tools. While we strive for accuracy and clarity, AI-generated content may occasionally contain errors or omissions. Please verify critical information and let us know if you spot anything that needs correction at <u>artificialintelligence@arizona.edu</u>. We value your feedback in ensuring the highest quality communication.

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BIOSPHERE 2 + AI CORE COLLAB

Programming Collaboration

A Student-Led Groundbreaking Challenge!

実験が設備の時間の目のののの

On March 22nd, AI Core partnered with Biosphere 2 to kick off a new collaboration at Hack AZ, and over 300 people showed up! Wildcats brought their innovation and ingenuity to launch what will be a long-term collaborative project with Biosphere 2, whose mission is to help humanity address issues of food security, as well as the integration of Artificial Intelligence (AI) into food and atmosphere production on Earth and beyond.

What's **Biosphere 2** exactly? Well, only the world's largest enclosed earth science laboratory, of course. They're focused on environmental research, education, and entrepreneurship leading to solutions in addressing the generational challenges of climate change, biodiversity loss and sustainable development.

As for **Hack AZ**, it's a student-driven hackathon at the University of Arizona, designed to empower students to innovate, learn and connect. During this Hack AZ, AI Core helped students carve out an AI strategy to leverage their skills and expertise across various disciplines to make a meaningful difference in fighting climate change.



The HackAZ kick off unfolded through 3 challenge levels:



Level 1 - Groundwork

Students got a Large Language Model (LLM) installed on their devices with the help of the AI Core team.



Level 2 - Application

Students then used their LLMs to perform meaningful scientific analysis (with datasets provided by Biosphere 2).



Level 3 - Scaling Up

Each LLM communicated with other participants' LLMs under the control of Al Core + Biosphere 2 to perform higher level reasoning.

Have an impact on the future of humanity!

This was just the beginning! As our partnership with Biosphere 2 continues, students will have the opportunity to continue contributing as AI Core builds a first-of-its-kind Digital Twin and evolving LLM network - an Ecology of Intelligences - to continue the research and discovery around the challenge of sustaining living ecosystems. We make our greatest progress when we take on challenges together!

Interested in the potential of digital twinning?

Reach out to <u>ashblack@arizona.edu</u>

Image Credit

VIBE CODING - GOOD VIBES OR HYPE?

The AI Revolutionizing Coding

Okay, so let's talk about vibe coding. If you haven't heard the term yet, buckle up! Because it might just be the weirdest and most exciting shift in how we think about programming in a long time. At its core, vibe coding is all about coding by feel. Yes, feel. Instead of drowning in syntax rules and error messages, imagine using intuitive tools that respond to your energy, your aesthetic, your vibe.

Basically, how vibe coding works is that, rather than manually inputing code and doing all the heavy lifting yourself, you verbally direct an AI to do that for you. Think of it like the difference between being a construction worker versus being the foreman organizing them. Or better yet, a violin player versus the maestro directing them in an orchestra. Sure, you're no longer getting your hands dirty in the nitty-gritty, under the hood stuff, but you're still running the show. What makes vibe coding so exciting is that everyone from artists, writers, designers people who never saw themselves as "coders" - can now build cool, functional programs, games, and much more without feeling like they need a PhD in Python or C++. Whether you're a seasoned dev looking for that next spark or a newbie who just wants their tools to stop gatekeeping good ideas, vibe coding is worth keeping an eye on. It's not perfect, but it's trying to make coding feel less like a chore and more like art.

And honestly? That's a vibe I can get behind.

Want To Give It A Go? Here's 25 Vibe Coding Tools You Can Try!

Games Made In <u>Hours</u>, Not Days!



In the past month alone there's been an explosion of new vibe coded games on platforms such as Levels.io. For example, a fully playable (if somewhat simple for the time being) flight simulator was vibe coded in just a few hours. Or as seen in the image to the left, a Minecraft-inspired first person shooter with working multiplayer- coded in a similar timeframe. It's so fast, that there's even a competition called Vibe Jam to see what people can come up with! WE WANT TOC A F E A HEAR FROM YOU!

Send your questions about AI to: artificialintelligence@arizona.edu

YOUR LOCAL AI HANGOUT SPOT

Check out other FAQs on our website

Question:

"How can we tell if the AI we are using is biased?"

Oliver S. ~ Junior ~ Fine Arts

Answer:

"Honestly, there's always going to be some degree of bias in any AI model. Unfortunately, that's just kinda unavoidable in how they're trained. Recent models such as ChatGPT 40 do have deep research features and are able to cite their sources, but ultimately if you want to be absolutely sure, the only way is to cross-check the responses with your own research, or other AI models.

Tyler G. ~ Content Creator @ Al Core

Question:

"There have been times when I used AI tools and gotten wrong answers. How dependable can we be on AI?"

Shreya B. ~ Junior ~ Biology

Answer:

"Yeah, AI has this weird habit of hallucinating details based on what its training data thinks it should say, rather than what is actually true. This might actually happen (at least with leading models like ChatGPT 40) at the same frequency that a human might goof up when talking about something. So here's my take: fact check it in the same way you might verify something any regular ol' human says; it's likely accurate, but good to verify. It also depends on if you are using AI for brainstorming or research - always check sources when you are seeking factual information.

Tyler G. ~ Content Creator @ Al Core

Question: **"How does Al impact the**

environment?"

Amanda G. ~ Senior ~ Animal Sciences

Answer:

This is an important topic! AI does have an impact because of the computation and resource (like water, electricity, and energy) requirements. Plus, mining materials that are found in hardware also has an impact, so the carbon footprint of AI is important to understand. There are experts researching this, and also looking at the potential positives – how AI can be used to further research and address environmental issues. Your question sent us mining for information from experts, so check out this MIT article <u>Explained: Generative AI's Environmental Impact</u>. Personally, I'm a big advocate for greater understanding of AI's potential environment impact, and what we as users can do, so I appreciate you putting this question out there!

Amanda H. ~ Program Manager @ ICDI

BRUTALIST AI

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OPINION:

How AI Could Change The Film Industry... For the Better!

By Tyler Green

<u>Source: Vanity Fair</u>

Picture this: you're making a historical drama whose characters are supposed to have authentic Hungarian accents, and you don't want them to sound like your average American tourist struggling to order "*un bouillabaisse à la Marseillaise*", but... slight problem, your budget is only \$10 million-- which may sound like a lot, but in the film industry, that's pocket changewhich means that hiring dialect coaches to get your very much un-Hungarian actors to sound like they were just plucked out of Budapest... yeah, that's gonna be a hard sell.

So, what do you do? Now, you could either just make do with some half-assed Hungarian accents that are almost guaranteed to make every Hungarian within a 500 lightyear radius cringe into another dimension, or you could just ask AI to slightly adjust their voices to sound more Hungarian. Guess what The Brutalist did? Yeah, that's where the controversy comes in: they used Respeecher's AI generative voice services to alter their actors' voices. The problem is that a lot of people consider this to be almost equivalent to doping in sports– in other words, using performance enhancing drugs to make oneself faster.

That's a pretty valid worry- if we're looking at this as a cheat code, that is. And that's not what this technology is. You see, if we take a step back a moment and view the AI as, you know, a collaborator, then using it in a fairly limited capacity such as this- in a way that objectively makes the film more authentic and improves it creatively- doesn't seem all that bad. Image Credit: Wikimedia



And that's where I think AI's place in the film industry should be. Not in entirely replacing the need for human writers or completely supplanting human-made visual effects, but rather in collaborating and contributing to help elaborate an artist's vision in the same way special effects would. Would you say an actor wearing a motioncapture suit and enhancing their performance through CGI is cheating? No, of course not, because it's simply another set of tools a film can use to better express its vision. Same thing for these AI voice tools. It's just another tool in the doesn't invalidate other toolbox. and it performances.

Now there's a whole other can of worms when it comes to using generative AI to create entire storyboards or to resurrect dead actors without them having any chance to offer their consent, and that **is** the kind of stuff we actually need to be wary about. But using AI in small doses like this? It'd be awfully wasteful to fear-monger it into oblivion.

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By Tyler Green CHATTING UP AN IMAGE?

CHATGPT'S VIRAL NEW IMAGE GENERATION FEATURES

OpenAl just dropped some new image generation tech inside ChatGPT (yes, the thing you've been using to write awkward emails and find last minute travel itineraries), and it's seriously wild!

You've likely already jumped on the hype train by giving your photos that Studio Ghibli-style glow-up with ChatGPT's wild new image gen. Whether amazed, amused, or slightly unnerved (honestly, probably all three), many of us have watched as our selfies transform into anime-inspired masterpieces. But if you're late to the party, here's the scoop: ChatGPT now lets you upload images and tweak them into pretty much any style you want. And for reasons known only to the internet gods, "Spirited Away" creator- Studio Ghiblianime-esque visuals are apparently the move.

Viral trends aside, the real flex isn't turning yourself into a Ghibli extra, it's the fact that you can actually talk to the AI while it creates. Realtime feedback, on-the-fly tweaks, and a whole back-and-forth vibe? That's the game-changer. Conversational image gen, if you will.

> Conversational image gen leads to more creative and varied results. Cyborg horse, anyone?







BET SAY LESS of we're bringing the 14 OG chaos 14 back but making it make sense this time. Here's									
the glow-up plan:									
ITHE STATION VIBES — Solarpunk But Grounded									
 Multi-level rails that are ACTUALLY PHYSICALLY POSSIBLE									
Clear signage, glowing floor tiles, II solar lamps, art nouveau meets eco-future.									
Transit maps you could lowkey get lost in — Tokyo x Paris metro energy but '+ aesthetic'+.									
🕴 🕴 PEOPLE, BABY									
 Crowd of commuters, all dripped out in solarpunk fits: flowy fabrics, tech-y accessories, earthy tones with that indescent POP. 									
 Someone skating by on a solar hoverboard (but grounded, chill, no Back to the Future nonsense). 									
 A couple on a bench sharing bao buns, a grandpa dozing with a robot dog at his feet, a student frantically checking the timetable. 									

What makes this so special is that most existing image generators spit out results based on a single prompt, leaving you stuck if the output misses the mark. ChatGPT changes that by letting you refine your ideas through real-time conversations. Instead of endlessly guessing what wording might magically create your vision, you can just directly discuss and adjust as you go. It feels less like shouting instructions into the void and more like brainstorming with an artsy bestie who actually has the patience to handle your endless revisions. I dunno about you, but that sounds a lot more appealing to me.

"Cool, I can chat with AI while it draws, big whoop," you might be thinking. I mean, I don't blame you, I was skeptical too at first. But you'd actually be surprised at how much of a difference it makes. Even just hinting that something feels off with an image, for example, can prompt the AI to spot and fix the issues immediately, even offering a slew of new ideas for improvements.

So yeah, conversational image gen isn't just some shiny new gimmick, it's a legit shift in how we create. You're not playing prompt roulette anymore; you're cocreating with something that actually listens. And once you've tasted that kind of control? Good luck going back to the old "type, pray, repeat" routine.

WHAT'S THE TEAM UP TO?

AI CORE'S LATEST PROJECTS

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Anastasia's Web XR



One of our XR developers. Anastasia Rastelli. has been pushing the boundaries of what's possible with Al-creating entire digital environments where every element was generated with the help of Al. Using a combination of Grok, ChatGPT-4o, and ChatGPT-40 Mini, she generated all the code and brought it all together in the code editor, VS Code. This enabled everything from Al-generated skyboxes and 3D model uploads to custom character movement and interactive systems.





For the skyboxes, she used Rosebud AI, refining and rewriting the prompts with ChatGPT to produce stunning, tailored visuals. Even the voice control tools were built with AI. By integrating the ChatGPT API (Application Programming Interface), Anastasia could simply speak what she wanted to create-like "generate a pink pretzel"-and the AI would instantly bring it to life. She could also use voice commands to control movement, making interactions fully hands-free. From the code to the visuals to the voice interaction, this project was entirely Aldriven. And with tools like these, the creative possibilities are truly endless.



This Month:

In the past month, we've seen a whirlwind of exciting new AI tools, and many well awaited improvements to existing ones. This month we're going to look at two of them, Windsurf Wave 5, and Stability AI's Virtual Camera. One of these tools will make your coding workflow even smoother, while the other opens the door for AI 3D modelling to become even more advanced than ever.

Windsurf Wave S

Ever wanted to code but felt overwhelmed by having to navigate a wall of text? Windsurf is here to help. You see, rather than just responding to a prompt and giving you some code to copy into a project, Windsurf actually peeks over your shoulder at what you're working on and is able to navigate it, making changes as necessary. That's pretty powerful, but what its latest version released this past month – Wave 5brings to the table, is much faster latency, an even more powerful tab function (basically, the ability of the AI to actually move the cursor), and much more!

Find out more at Windsurf's Website here!

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THE AI TOOLBO



What Can Windsurf Do?

- Help with the "vibe coding" process through more traditional coding
- AI can fully navigate your code and make changes on the fly
- Free users get unlimited tab completion
- Ideal for non-coders.



Stability AI's Stable Virtual Camera

AI generated, real-time 3D modeling is here! Stability AI's stable virtual camera allows for a 2D source image to be processed into a full 3D scene. For example, in the image to the left, the user has uploaded a 2D photo of some potions, and Stability AI was able to analyze that and interpret what it would look like in 3D. This means that you can rotate, zoom in and out, and view the bottles from different directions in full 3D, all from one 2D image. What makes this different from your typical AI video generation is that Stability AI allows for complete control of camera movement.



A Filmmaker's Toolset

According to Stability AI, the Stable Virtual Camera can be used to "Follow user-defined camera trajectories as well as 14 other dynamic camera paths, including 360°, Lemniscate, Spiral, Dolly Zoom, Move, Pan, and Roll." Oof, that's a lot. This opens up a lot of possibilities for filmmaking, where stability (pun intended) and consistency in camera movements is really important. This could open the way for even more AI involvement in films.

Learn more at Stability AI's Website!

What Can Stable Virtual Camera Do?

- Interpret 2D photos into full 3D scenes.
- Full control over camera movements within generated 3D environments.
- Consistent and smooth dynamic 3D camera movement.





SPOTLIGHT: AI CLUB

Meetings on Wednesday from 5:00PM - 6:00PM in Gould Simpson 837

UA

A Space For Innovators!

Interested in AI and want to explore different ways to use it? Or maybe you want to learn more about the latest AI tools and have the chance to meet new people? Join AI Club today! We aim to create a fun, collaborative environment where everyone is welcome to share their ideas, or even just chat. With AI developments happening at a faster pace every day, it's important to have a space to engage with those changes in a friendly, supportive environment.





The UA AI Club is the University of Arizona's premier student-run AI Club. We are a community of 150+ builders, learning and creating with the latest technology to accelerate ourselves with AI. Regardless of experience, we believe anyone can do this – from building an app in 5 minutes, creating fully autonomous research reports, or learning the architectures behind cutting edge LLMs.

Our meetings are every Wednesday from 5:00PM - 6:00PM in Gould Simpson 837 and open to everyone excited to get started!