



AI Implications

April 21, 2023

Nye Warburton
Animation Technologist, Educator



**Nye
Warburton**

**THE
THIRD
FLOOR**

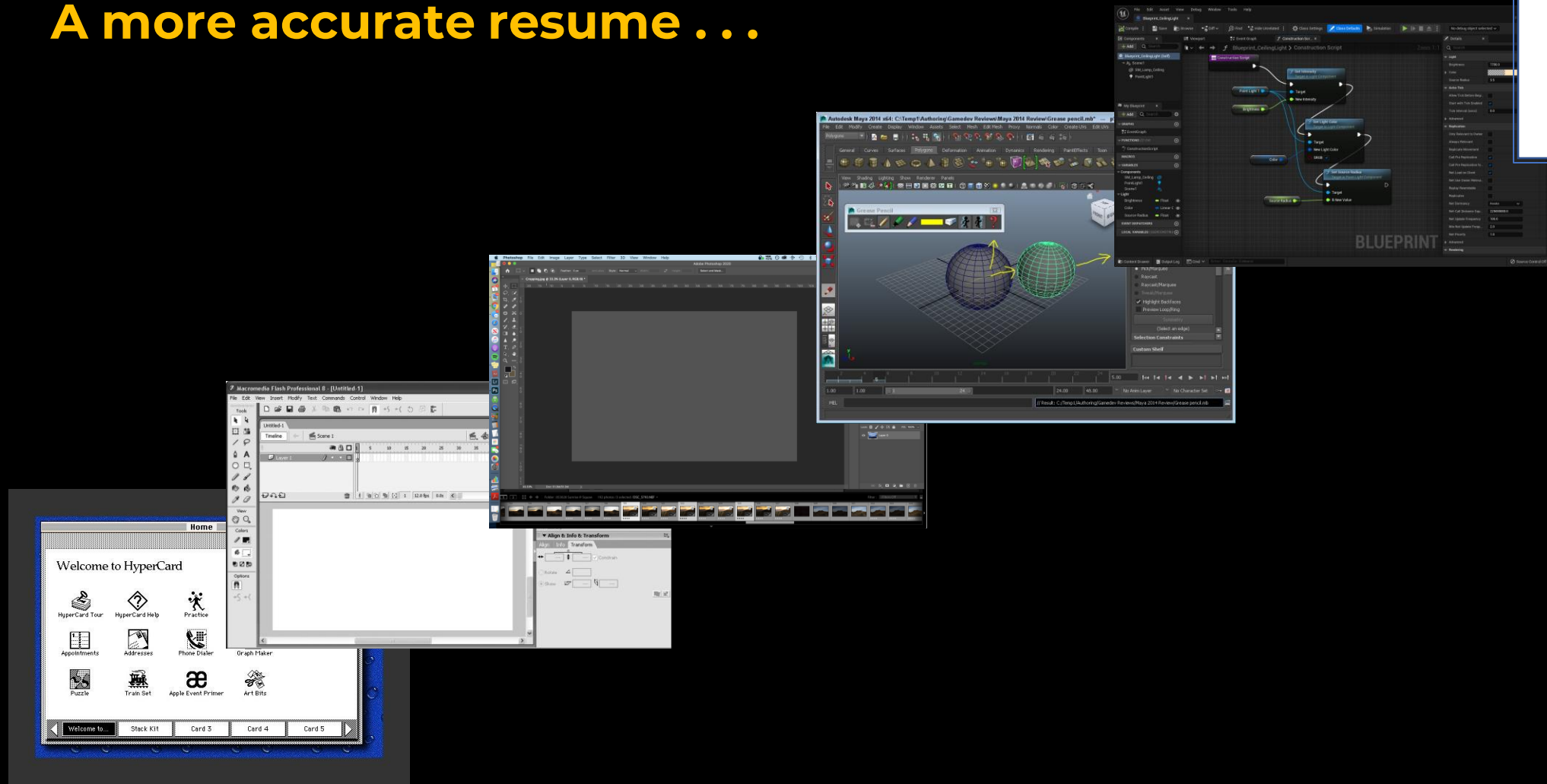
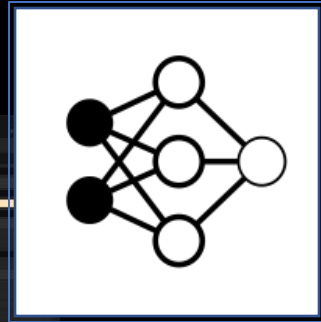
**DIGITAL
DOMAIN**

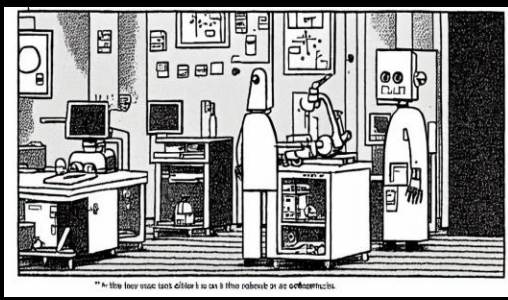
WALT DISNEY
Imagineering



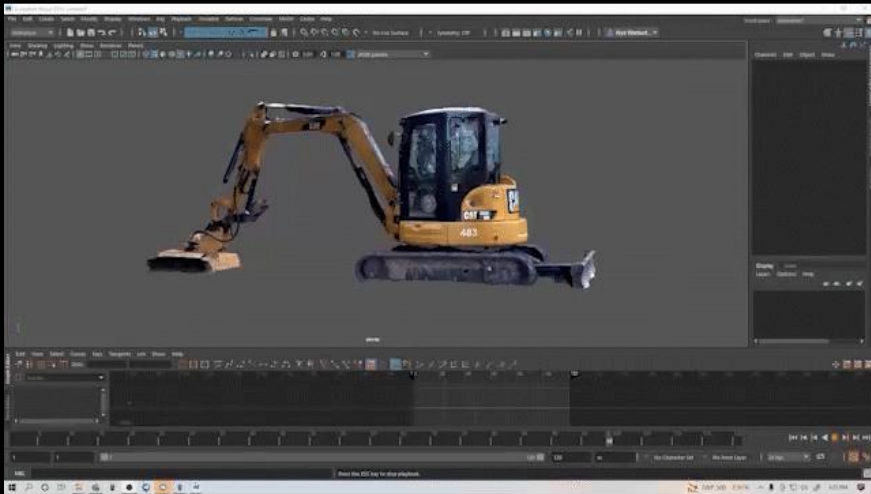
SCAD 

A more accurate resume . . .





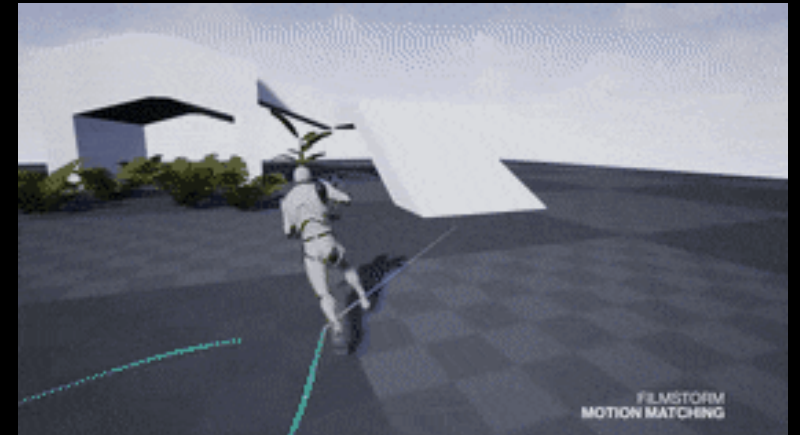
Recent Experiments



Neural Field Radiance
(NERF)
LumaLabs.ai



Whisper Training
Voice Model



Film Storm
Motion Matching

Natural Language

Creative Solutions

Adept bardeen Orby AI stealth

Social Agents

Character.AI Woebot
Replika

Developer

Cohere Hu

Knowledge Mgt



Writing

HyperWrite No
grammarly AI21 Labs

Search

neeva stealth
DASHWORKS Metaphor

Legal

stealth

Marketing Copy

copy.ai copysmith
Hypotenuse AI anyword

New toys
by the day!

Image

ROSEBUD.AI reface
YOMBO Enstil craiyon

Music

RAW Aiva Technologies

Video

Generation

RunwayML

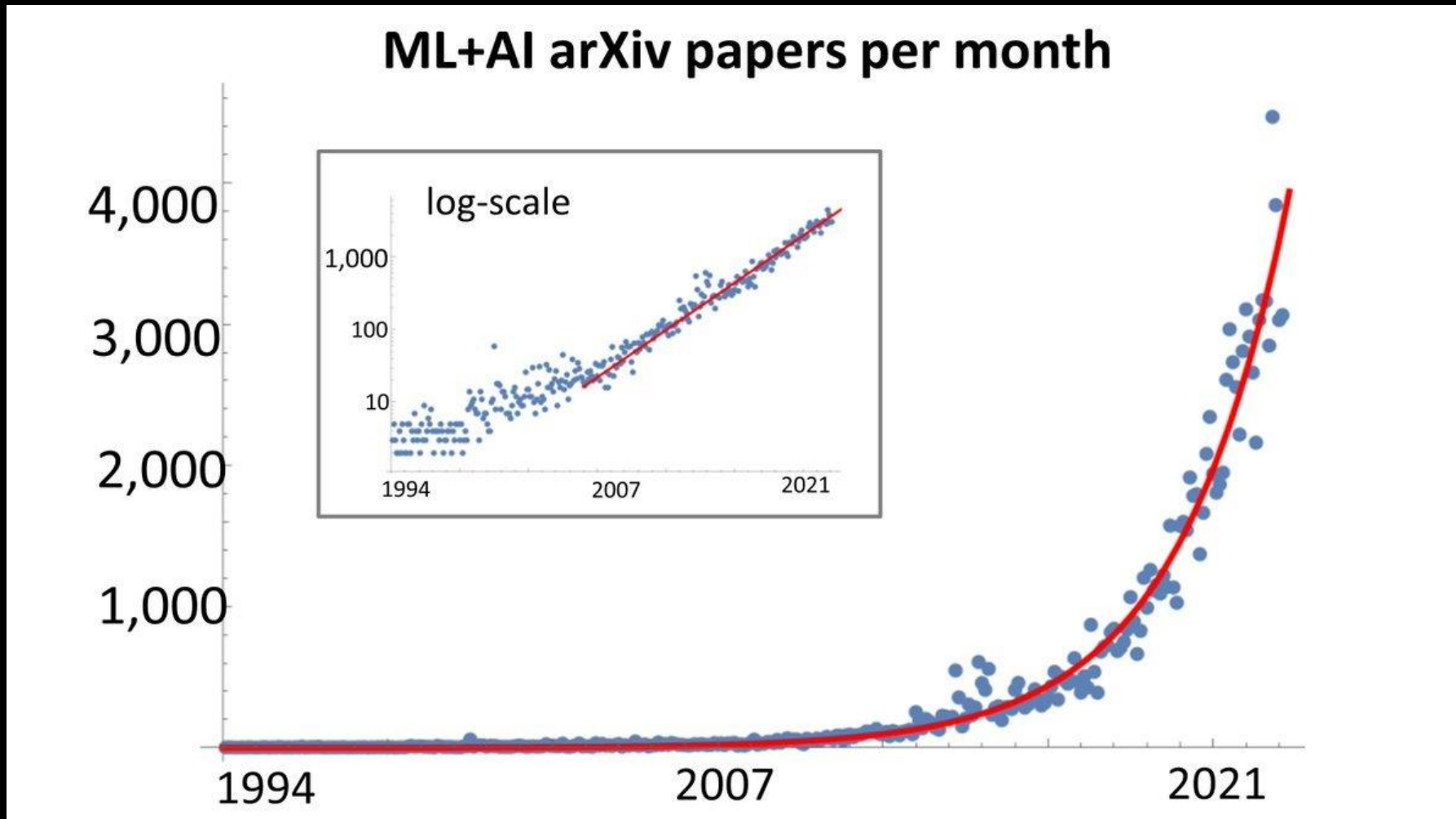
Personal

Synthesia Hour One.
tavus EmbodyMe FLAWLESS

Editing

Reduct Video deepdub.ai

It's only beginning...



Jack Soslow
@jacksoslow
(a16z) Andreessen
Horwitz



JELLYBEANS

NEURAL NETWORK | Prediction

GENERATIVE | Latent Space

LLM | Intelligence

FOUNDATIONAL | Tuning

AI & EDUCATION

AI @ SCAD

Q and A

High-resolution color photograph of a large jar of jellybeans sitting on a counter in a kitchen.

Stable Diffusion 2.0, Leonardo.ai



With great **(collective)**
power, comes great
(collective) responsibility.

TRANSPARENCY
ATTRIBUTION and LICENSING
CULTURE OF COLLABORATION

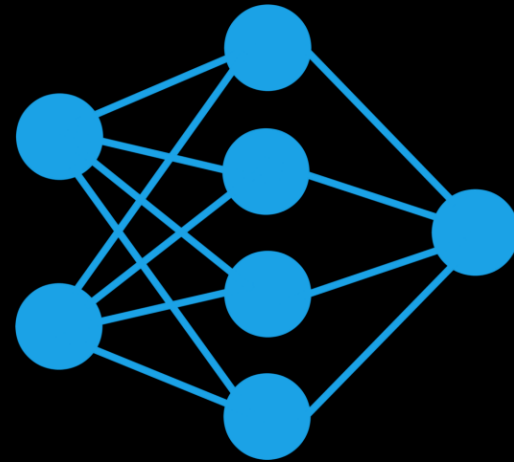
NEURAL NETWORKS | PREDICTION

GENERATIVE | LATENT SPACE

LLM | INTELLIGENCE

FOUNDATIONAL | TUNING

NEURAL NETWORKS | PREDICTION





PowerRanger

Images Camera Export

Label

Train

Use

All Images 100%

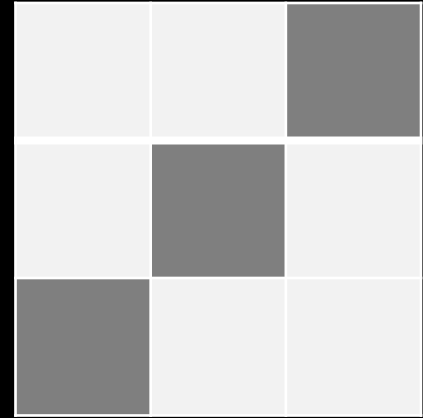
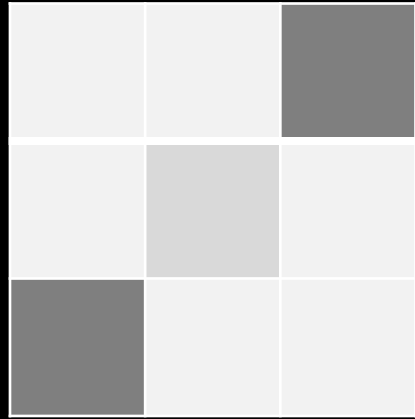
Nope 100%

PowerRanger 100%



100% of images are predicted correctly.

Pattern Recognition



Neural Networks

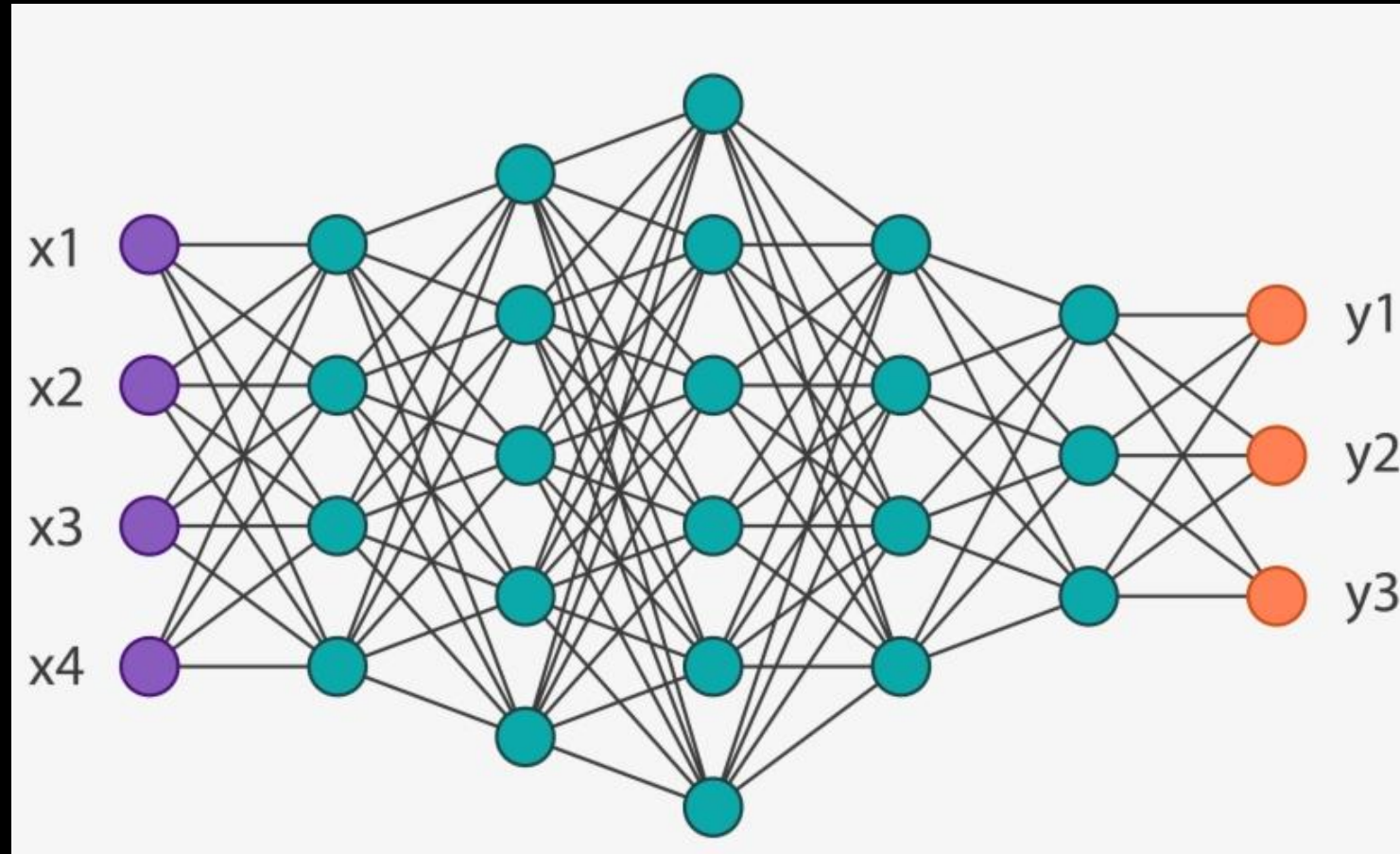




Image Segmentation



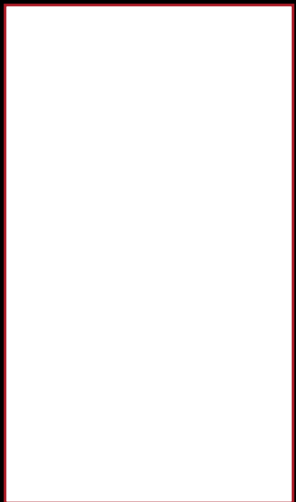
PoseNet

Go, Go, Power Rangers

Data Set
With Power Ranger

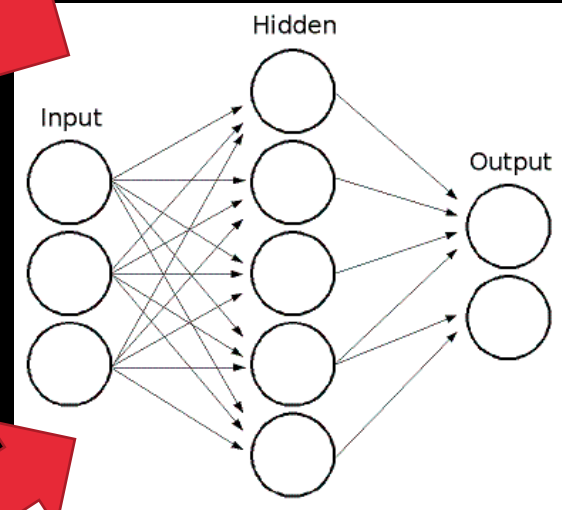


5164651516
1132165131
1561561650
5151123457
9738588157
1813576518



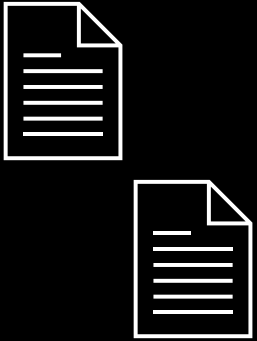
Data Set
Without
Power Ranger

9874651354
5187563419
9513574688
7516485123
1854678913
5874231659

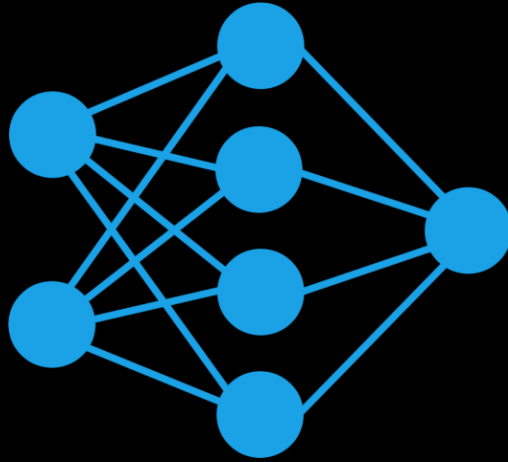
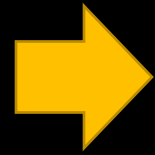




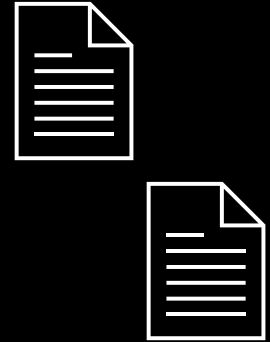
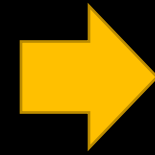
GENERATIVE MODELS | LATENT SPACE



Input



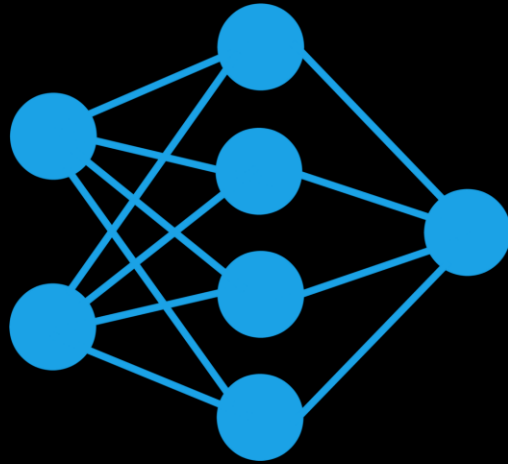
Model



Output

Prompting

“Portrait painting of George Washington drinking a beer, highly detailed, art by Greg Rutkowski”

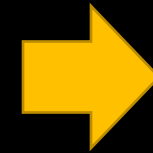
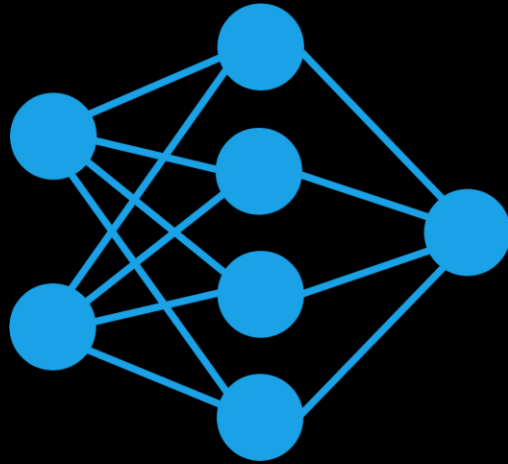


**Stable Diffusion
pre-trained on
2.6 Billion Images**



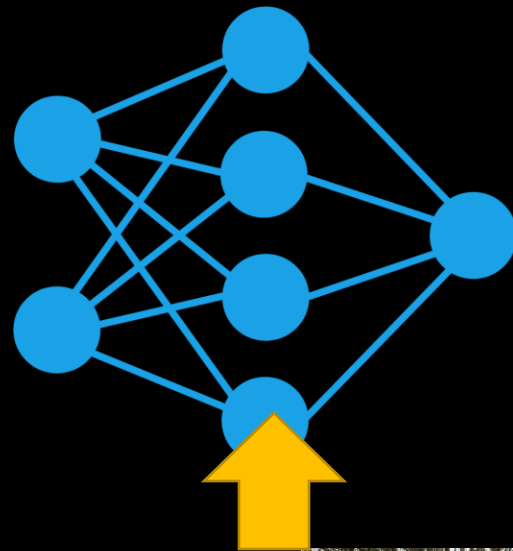
Prompting Limits

“Portrait painting of an Animator from Los Angeles, with glasses, blonde hair and a goat-tee.”



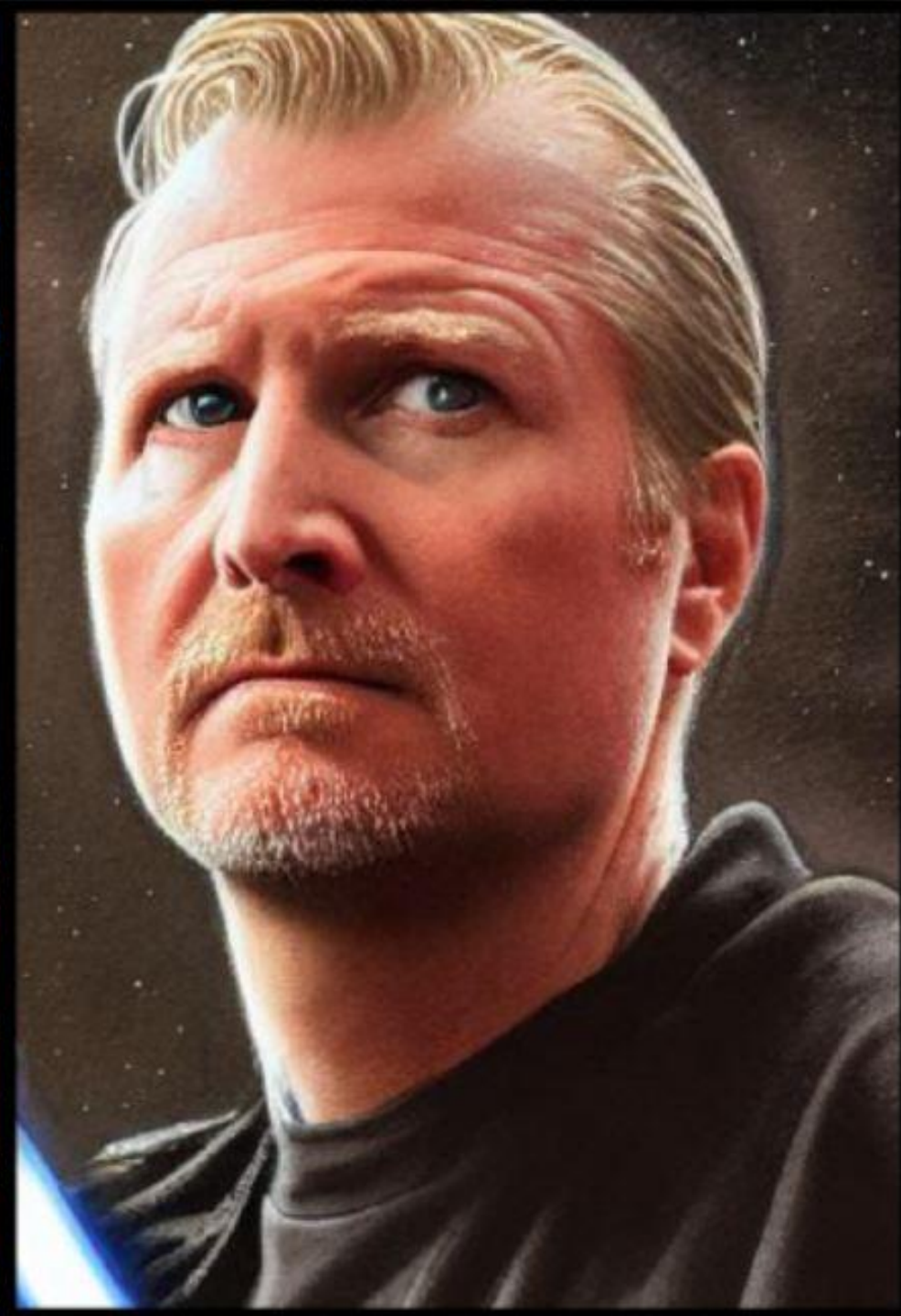
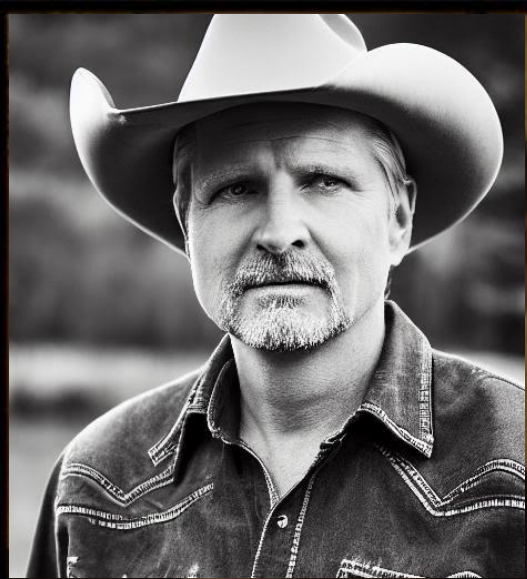
Tuning

“(Nye) as Iron Man with his helmet off, looking heroic in his back yard.”

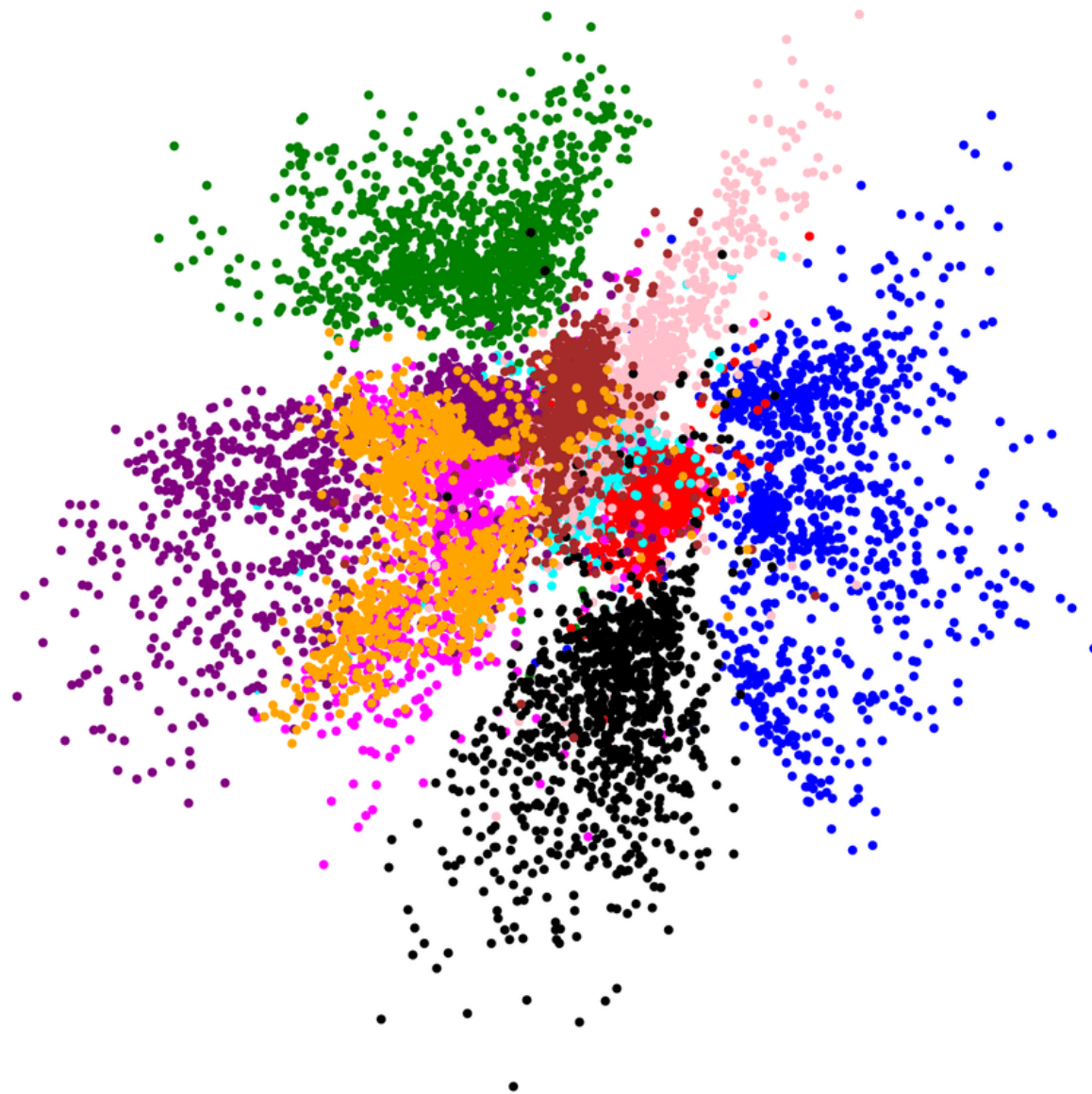


Trained with (Nye)
Image Set





LATENT SPACE







Evolution

Stable Diffusion v2.0, January – March 2023

Control Net





9,050

Number of Images

1 2 3 4 5 6 7 8

Prompt Magic V2

High Contrast

Prompt Magic Strength 0.4

Public Images

Image Dimensions

512 x 512 768 x 768 512 x 1024 768 x 1024 1024 x 768 1024 x 1024

W 768 px

H 768 px

1:1

Guidance Scale 7

ControlNet

Tiling

AI Generation Tool

(masterpiece), realistic, (48 yr old male), wearing a suit and a dress shirt with the top button open, sunlight, cinematic light, blue eyes, blonde hair, (head frame), center image, style, bioluminescent, 8 life size, 8k Resolution, human hands, curiously complete, elegant, close to perfection, dynamic, highly detailed, character sheet, concept art, smooth, positioned so that their bodies are symmetrical and balanced directly towards the viewer

(((2 heads))), (((duplicate))), ((malformed hand)), ((deformed arm)), ((freckle)), naked, blurry, abstract, deformed, thick eyebrows, cartoon, animated, toy, figure, framed, 3d, cartoon, bad art, deformed, poorly drawn, extra limbs, close up, weird colors, blurry, watermark, blur haze, long neck, watermark, elongated body, cropped image, out of frame, draft, (((deformed hands))), ((twisted fingers)), double image, ((malformed hands)), multiple heads, extra limb, ugly, ((poorly drawn hands)), missing limb, cut-off, grain, bad anatomy, poorly drawn face, mutation, mutated, floating limbs, disconnected limbs, out of focus, long body, disgusting, extra fingers, (weird figure), missing arms, mutated hands, cloned face, missing legs, long neck

Finetuned Model Deliberate 1.1 +640x832 None Add Negative Prompt Generate

This will use 4 tokens. 9,050 tokens remaining.

Image Generation Prompt Generation

(masterpiece), realistic, (48 yr old male), wearing a suit and a dress shirt with the top button open, sunlight, cinematic light, blue eyes, blonde hair... Negative prompt: (((2 heads))), (((duplicate))), ((malformed hand)), ((deformed arm)), ((freckle)), naked, blurry, abstract, deformed, thick eyebrows, cartoon...





create a short paragraph promoting an hour long workshop on the use of AI for art students. The talk is called "Training AI for Creatives and Artists" and will be hosted by the Associate Chair of ITGM, Nye Warburton. We will cover topics like training, diffusion, language models, and how software will evolve in the very near future. Don't miss it.



Attention all art students! Are you curious about how artificial intelligence can enhance your creativity? Join us for a one-hour workshop called "Training AI for Creatives and Artists," hosted by Nye Warburton, Associate Chair of ITGM. In this workshop, we will delve into the world of AI art, covering topics like training, diffusion, language models, and how software will evolve in the very near future. Don't miss it.

LLM Intelligence

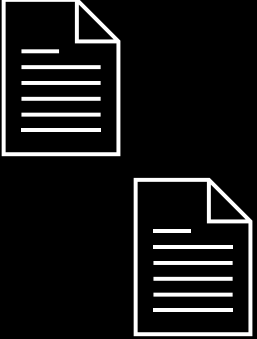
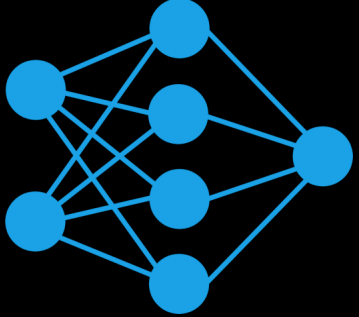
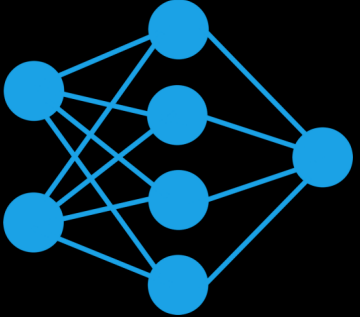
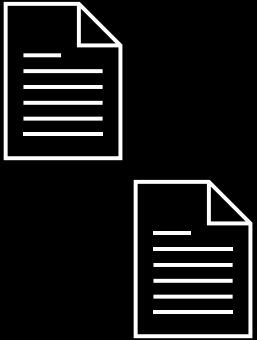
GPT

**Generative
Pretrained
Transformer**



NATURAL
LANGUAGE
PROCESSING

TRANSFORMER



Prompt



Model



Output

- + New chat
- New chat
- Brother's 40th Birthday Gift.
- Transformer AI Model Explanat
- AI Risks for Humanity.
- Tech, AI, & Learning.
- Update Uni Curriculum Strateg
- ChatGPT Explained: AI Progra
- Spacebar Bot Newsletter.
- D-Org Creator Revolution.
- Stable Diffusion Prompting.
- Barbot Adventures.
- Giant Transforming Robot Ima
- AI Disrupts Higher Education
- Neural network creates classifi
- AI Workshop for Art Students
- Upgrade to Plus **NEW**
- nytrogengraphics@gmail.com ...

ChatGPT

| Examples | Capabilities | Limitations |
|--|--|---|
| "Explain quantum computing in simple terms" → | Remembers what user said earlier in the conversation | May occasionally generate incorrect information |
| "Got any creative ideas for a 10 year old's birthday?" → | Allows user to provide follow-up corrections | May occasionally produce harmful instructions or biased content |
| "How do I make an HTTP request in Javascript?" → | Trained to decline inappropriate requests | Limited knowledge of world and events after 2021 |

Send a message...

ChatGPT Mar 23 Version. Free Research Preview. ChatGPT may produce inaccurate information about people, places, or facts.

NEURAL NETWORKS | PREDICTION

GENERATIVE | LATENT SPACE

LLM | INTELLIGENCE

FOUNDATIONAL | TUNING

New Operating System



Published by "Microsoft Corporation"

| | | | | | | | | |
|---------------------------------------|---------------------------------------|--------------------------------------|---|--|-------------------------------------|--|---|---|
| Groove Music ★★★★ Installed | Movies & TV ★★★★ Installed | MSN Weather ★★★★ Installed | MSN News ★★★★ Installed | Microsoft People ★★★★ Installed | OneDrive ★★★★ Installed | Microsoft Messaging ★★★★ Installed | MSN Sports ★★★★ Owned | MSN Money ★★★★ Owned |
| Xbox (beta) ★★★★ Owned | Office 365 Admin ★★★★ Owned | City Art Search ★★★★ Free | Microsoft Sticky Notes ★★★★ Installed | Translator for Microsoft Edge ★★★★ Owned | 3D Builder ★★★★ Installed | Xbox Accessories ★★★★ Free | Windows DVD Player ★★★★ Owned | Microsoft Remote Desktop Preview ★★★★ Owned |
| Get Office ★★★★ Installed | Sway ★★★★ Owned | HealthVault ★★★★ Owned | Office Online ★★★★ Owned | Feedback Hub ★★★★ Installed | OneNote ★★★★ Installed | Word Mobile ★★★★ Owned | Excel Mobile ★★★★ Owned | PowerPoint Mobile ★★★★ Owned |



Plugin store

| | | | |
|---|---|---|--|
| OpenTable Install | FiscalNote Install | Instacart Install | Zapier Install |
| Allows you to search for restaurants available for booking dining experiences | FiscalNote enables access to select market-leading, real-time data sets for legal, political, and regulatory... | Order from your favorite local grocery stores. | Use Zapier to interact with over 5,000+ apps like Google Sheets, Trello, Gmail, HubSpot, Salesforce... |
| KAYAK Install | Milo Family AI Install | Speak Install | Wolfram Install |
| Search flights, stays & rental cars or get recommendations where you can go on your budget. | Curating the wisdom of village to give parents ideas that turn any 20 minutes from meh to magic. | Learn how to say anything in another language with Speak, your AI-powered language tutor. | Access computation, math, curated knowledge & real-time data through WolframAlpha and Wolfram... |

< Prev 1 2 Next > [About plugins](#)



Application
(web app, bot, GUI)

Tuned Data

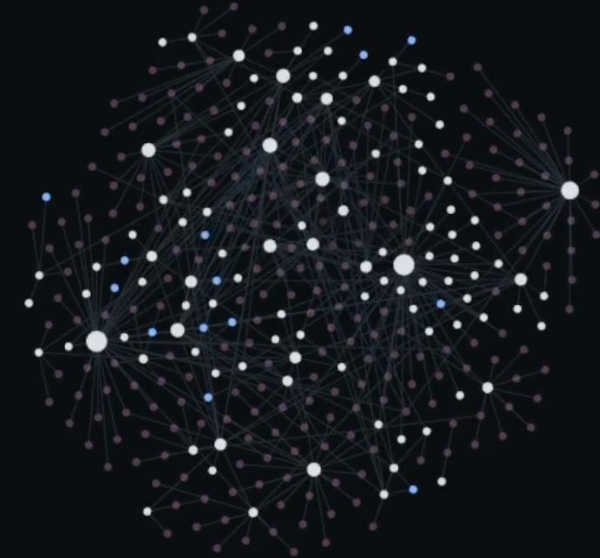
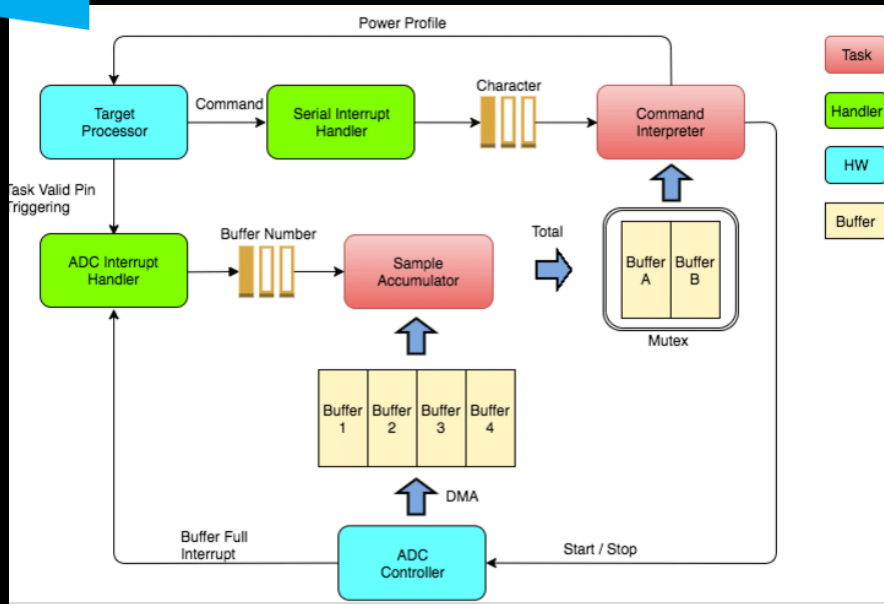
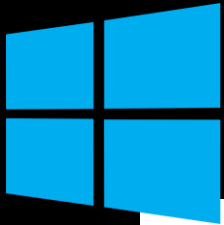
API



Foundational Model



Mental Shift



Building Datasets

Writing



Animation



Concept Art



Syllabi



Now



2024

Research

Bots!

Email

Assistants

Documentation

Agents

Programming

Personalization

Automation

Writing

Industry Specific

Concepting

Automation

Foundational Models

Ideation

Community / Social

Textures

Networks

Graphic/Web Design

Text to Video

Avatars



- Create New Proj
- Home
- My Projects
- Templates
- My Assets
- Community
- Marketplace

Media Player

0:00:00 | 0:00:14

2023-04-20 17-39-43

Media player controls: Mute, Previous, Play/Pause, Next, Full Screen, Volume, Share, Refresh, More options

N Nye Warburton
Closed Beta



Most Recent

Review

NEURAL NETWORKS | PREDICTION

GENERATIVE | LATENT SPACE

LLM | INTELLIGENCE

FOUNDATIONAL | TUNING

Education





Creativity Ideas & Community

AI Education Recommendations

Start with Documentation

Basics of AI Tooling (Image and LLM)

Understanding Dataset Creation

Agile Practice

Confidence/Emotional Intelligence

Collaboration

KUNG FU SPIKE ROBOT
Nye Warburton, March 2023

Stable Diffusion 2.0 – Leonardo.ai
1024x1024

Recipe:

Create an image of a robot with spikes training and fighting kung fu in a science fiction fantasy world, where technology and magic coexist. The robot should have a humanoid shape, with a metallic body covered in sharp spikes that serve as weapons and defensive mechanisms. Its armor should be ornate and decorated with intricate designs, showcasing its advanced technology and its connection to the fantastical world around it.



Attribution

Could someone replicate your recipe?

1. What model are you running?
2. What service are you using to run the model?
3. What Dataset, customization or chained models are you using to augment or change the output?
4. What prompt (or input) are you using?
5. How are you modifying that prompt (or input)?

AI@SCAD

- **Gradient Ascent (?)**
(discord and AI Club)
- Workshops?
- Reach out to **Prof Nye!**



Learn More ...

Books

- [AI, A Guide for Thinking Humans](#), Melanie Mitchell
- [Superintelligence](#), Nick Bostrom

Video

- **Two Minute Papers** with Karoly Zsolnai-Feher
- **Machine Learning for Art** with Gene Kogan

Demos

- **Lobe.ai** - lobe.ai
- **Stable Diffusion** – [Leonardo.ai](https://leonardo.ai)
- **Chat GPT** – chat.openai.com
- **Wonder Dynamics** – wonderdynamics.com





Pandora, the first woman, was given a box filled with gifts that would bring misery to humanity.

She was warned never to open it, but her curiosity got the better of her. When she opened the box, all manner of afflictions flew out and spread across the earth. Diseases, greed, envy, sorrow, and other terrible things infected the hearts and minds of all living beings.

But at the very bottom of the box, there was one small thing left: **hope.**



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But at the very bottom of the box, there was one small thing left: **hope.**

Written by ChatGPT

Illustrated by Stable Diffusion

Sources

1. - Stable Diffusion - Leonardo.ai - <https://leonardo.ai>
2. - Logos from Google Images
- Image shot on Iphone
3. - Disco Diffusion - Google Collab - https://colab.research.google.com/github/alembics/disco-diffusion/blob/main/Disco_Diffusion.ipynb
- Stable Diffusion - Leonardo.ai - <https://leonardo.ai>
4. - NERF/3d model creation - Lumalabs.ai
- Film Storm, Motion Matching - <https://filmstorm.net>
- Voice Cloning - <https://Resemble.ai>
5. Image from Twitter - Jack Soslow @jacksoslow (a16z) Andreesen Horwitz
6. Image from Twitter - Jack Soslow @jacksoslow (a16z) Andreesen Horwitz
7. - Stable Diffusion - Leonardo.ai - <https://leonardo.ai>
8. - Stable Diffusion - Leonardo.ai - <https://leonardo.ai>
9. -
10. Creative Commons, Unknown Author, Microsoft Powerpoint
11. OBS Capture of Lobe.ai
<https://lobe.ai>
12. Orgre Image - Creative Commons, Unknown Author, Microsoft Powerpoint
Additional Imagery, Photoshop by Author
13. Neural Network, creative Commons, Microsoft Powerpoint
14. Images from Google, Google Images, 2019
15. Power Ranger Photo by Author, Checkmarks Creative Commons, Microsoft Powerpoint
16. - Stable Diffusion - Leonardo.ai - <https://leonardo.ai>
17. Icons from Google, Creative Commons, Microsoft Powerpoint
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22. Google Images
23. - Disco Diffusion - Google Collab - https://colab.research.google.com/github/alembics/disco-diffusion/blob/main/Disco_Diffusion.ipynb
24. - Stable Diffusion - Leonardo.ai - <https://leonardo.ai>
25. - Control Net - Stable Diffusion - Leonardo.ai - <https://leonardo.ai>
- 26.

- Control Net - Stable Diffusion - Leonardo.ai - <https://leonardo.ai>

Sci Fi Attack Mech Recipe

Create a science fiction attack mech in battle on an alien planet. The mech should be depicted in the midst of a fierce battle, with explosions and laser blasts in the background. The planet's landscape should be harsh and rugged, with towering rock

formations and a red, alien sky. sleek and powerful, advanced weapons and technology that emphasize its dominance on the battlefield. dynamic pose, with its weapons firing and its thrusters blazing as it maneuvers around the rocky terrain. 55 mm camera, medium long shot.

27. Screen Capture of Chat GPT - <https://chat.openai.com>

28. Google Images

29. Google Images

30. Google Images, Obsidian

31.

- Stable Diffusion - Leonardo.ai - <https://leonardo.ai>

32.

- Stable Diffusion - Leonardo.ai - <https://leonardo.ai>

33.

- Stable Diffusion - Leonardo.ai - <https://leonardo.ai>

Science Fiction Station

Create a concept art of a science fiction movie-style bar in a space station orbiting a planet. Show a bustling establishment where comedic robot androids gather to enjoy drinks, with unique designs and advanced technology. Use lighting, decor, and layout to enhance the atmosphere. Science Fiction Action Movie scene, with space photography.

34. -

35.

- Stable Diffusion - Leonardo.ai - <https://leonardo.ai>

36.

- Stable Diffusion - Leonardo.ai - <https://leonardo.ai>

37.

- Stable Diffusion - Leonardo.ai - <https://leonardo.ai>

38.

- Stable Diffusion - Leonardo.ai - <https://leonardo.ai>

39. -

40. -

41. <https://amazon.com>

Artificial Intelligence: A Guide for Thinking Humans - Melanie Mitchell

Superintelligence: Paths, Dangers, Strategies - Nick Bostrom

42.

- Stable Diffusion - Leonardo.ai - <https://leonardo.ai>

Thank You!

<https://mirror.xyz/nyewarburton.eth>

<https://nyewarburton.com>

Email: nwarburt@scad.edu

Prof Nye Discord!

