

Pioneer Valley Chinese Immersion Charter School (PVCICS) SEPAC Meeting March, 2024

Empowering Youth: Exploring AI Tools for Learning, Storytelling, and Enrichment

PRESENTER: JENNIFER HE, FOUNDER WEBGLOW AI



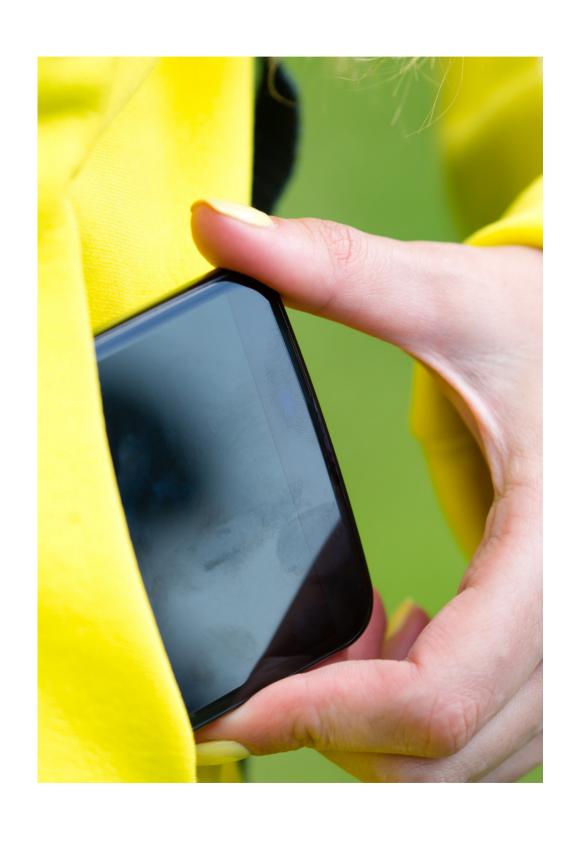




Hello, I'm Jennifer He

- 15+ years experience working as a web designer and UX specialist for higher ed, libraries, art institutions, and non-profits
- Experiencing teaching technology classes to students and librarians
- Founded <u>WebGlow AI</u> teaches students to use AI tools to improve their lives and offers web design services





Welcome!

Did you know there is **AI technology in your pocket**?

Mobile devices have AI functionality:

- Facial recognition
- Speech recognition
- AI infused apps
- Social media apps
- GPS

What is the most often common type of prompt for ChatGPT? Type answers in the chat!

About SEPAC

Special Education Parent Advisory Council

Mission & Goals

- Support parents, children, and the school
- Fill open positions Secretary/Communications & Treasurer
- Meet and greet parents at PVCICS school events
- Bring in dynamic speakers and more!

Visit the **SEPAC's Webpage**

Contact Us: pvcics.org

EMPOWERING YOUTH: EXPLORING AI TOOLS FOR LEARNING, STORYTELLING, AND ENRICHMENT

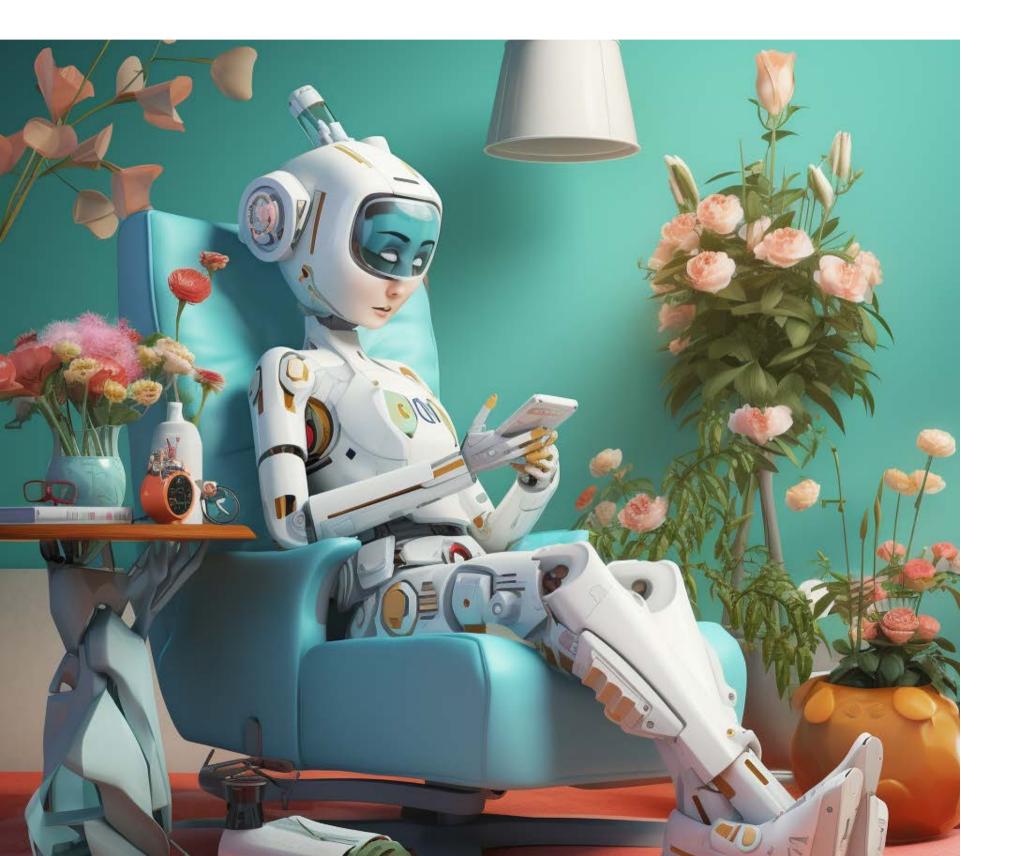
March 2024



March 2024

Agenda

- Introduction
- AI Tools for Learning AI Technology
- AI Tools for Educational Support
- AI Tools for Executive Functioning & Emotional Regulation
- AI Infused Educational Projects
- Q&A



Introduction to AI Technology

Topics Covered

- Definition of AI Technology
- How does AI work?
- General vs Narrow AI
- Pros & Cons

Basic Definition of AI -

Artificial intelligence leverages computers and machines to mimic the problem-solving and decision-making capabilities of the human mind.

Examples: self-driving cars, natural language processing, online shopping, social media.

General vs. Narrow AI

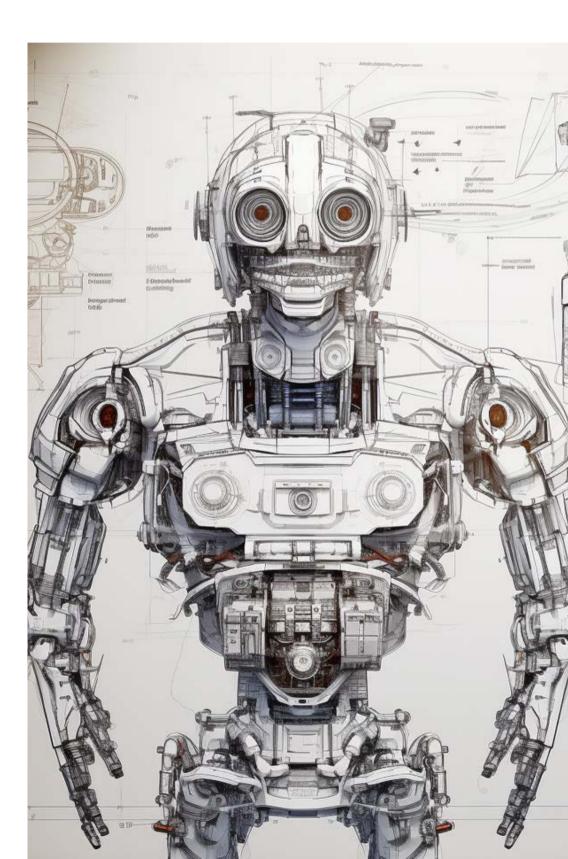
General AI

- Human-Like Intelligence
- Common Sense Reasoning
- Transfer Learning
- Self-Improvement
- Consciousness and Self-Awareness
- Human-Level Communication
- Adaptability to Unforeseen Situations
- Ethical and Moral Decision-Making
- Creativity



Narrow AI

- Specialized Functionality: Narrow AI is designed for specific tasks or domains and excels in performing those tasks but lacks broader capabilities.
- Limited Learning
- No Common Sense Reasoning
- Domain-Specific
- No Self-Improvement relies on human prompts for self-improvement
- No Consciousness or Self-Awareness
- Limited Communication understanding and context.
- Difficulty with Novelty
- Lack of Ethical Judgment
- Limited Creativity



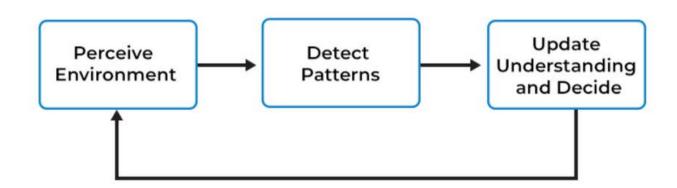
How Does AI Technology Work?

To put it simply, AI works by combining large data sets with intuitive processing algorithms. AI can manipulate these algorithms by learning behavior patterns within the data set.

It's important to understand that AI is not just one algorithm. Instead, it is an entire machine learning system that can solve problems and suggest outcomes.

Example - We could make an AI algorithm that recognizes animal faces (for a dog door) to let in our own dog and keep other animals out. The better the data in the dataset and the more training that our AI algorithm receives the better it would become at accurately recognizing animal faces and solving our real-world problem.

HOW AI WORKS





Al Pros & Cons

Pros

- Efficiency
- Automation
- Reduces human error
- Solutions to real-world problems
- Improved decision making
- Better predictions
- Cost savings
- Creative potential

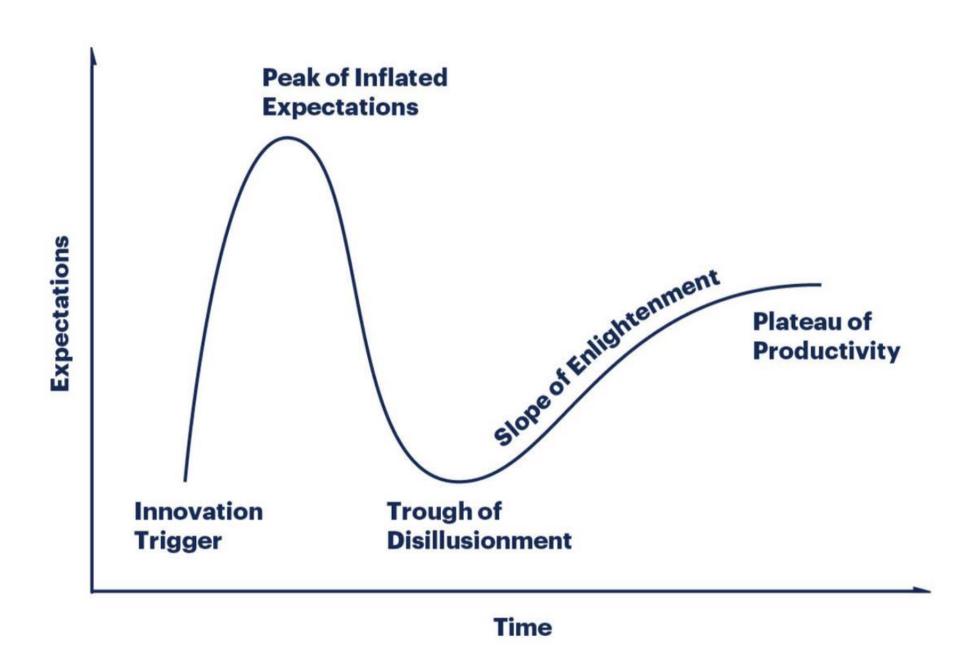
Cons

- Not perfect
- Privacy concerns
- Job replacement
- Misinformation
- Copyright concerns
- Potential bias
- Safety and security risks

Fun Fact: Why does generative AI tools produce different content? It's because of **temperature** - or amount of variation/creativity in a response. ChatGPT 3.5 has a temperature set to about .7 (fixed point).



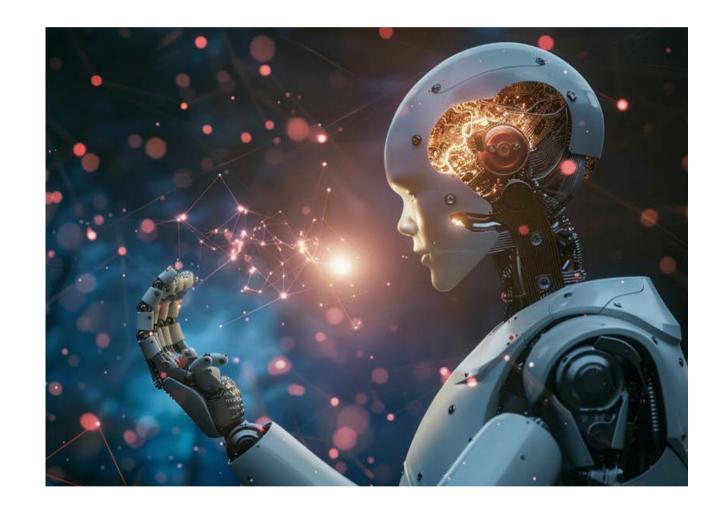
AI Technology Expectations



Gartner Hype Cycle - 5 Distinct Phases of Technology

Generative AI Tools - Best Practices

- Understand how the tool works
- Be specific when writing prompts
- Don't enter sensitive or personal data
- Realistic expectations No AI tool is perfect!
- Test and iterate
- Be aware of ethical and legal considerations
- Be intentional about the amount of content you create
- Avoid "AI Creep" use one main tool like ChatGPT
- If the task is complex and you want a premium result outsource to a person



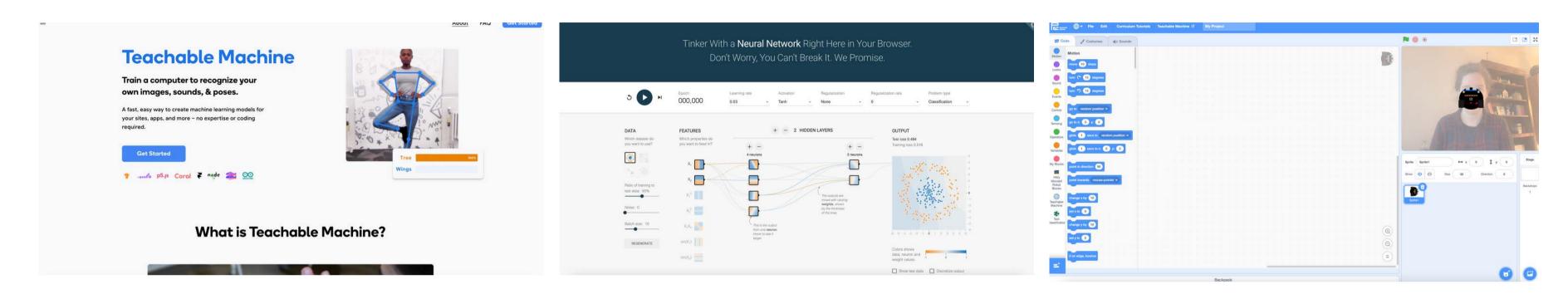


Learning AI Technology

Topics Covered

- Tools for Learning AI Technology
- AI Tools for AI Demos & Simulations

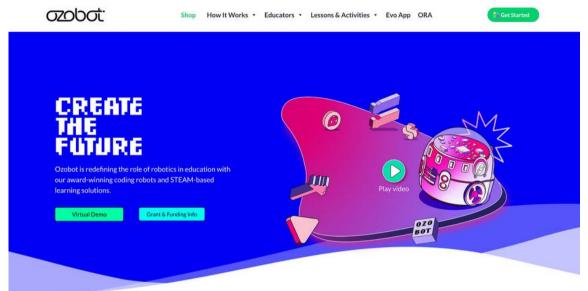
Tools for Learning AI Technology



- <u>Teachable Machine</u> One of the easiest way to teach computer how to recognize objects with AI
- <u>TensorFlow</u> an open-source software library for machine learning (ML), create neural networks in user's browser
- Raise AI Playground MIT project to teach AI with code blocks, design is reminiscent to Scratch
- **Cognimates** AI playground to program with AI

Robotics for Learning AI Technology

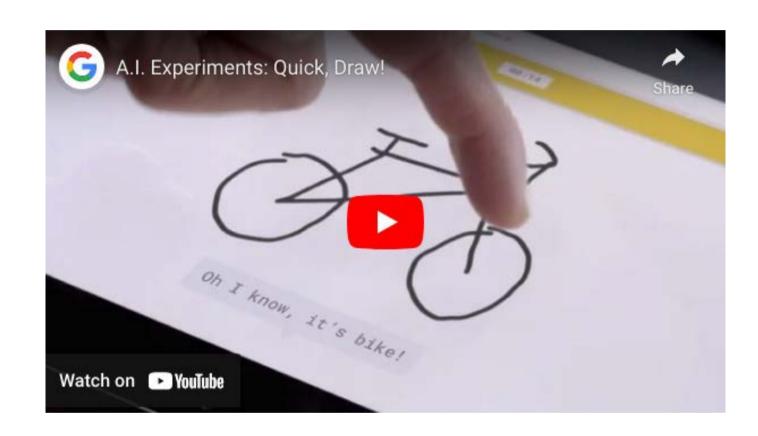






- Googles' AIY Kits Open-ended Maker kits that let users build AI according to their creativity
- Lego Mindshares Coming soon, AI infused lego builds
- Ozobot Coding robot
- Cozmo Article about AI features, AI gives robot emotions.

AI Drawing Tools - Perfect for Demos



QuickDraw -

<u>QuickDraw</u> - lets users draw and the AI tool guesses what the drawing. Developed by Google, free.

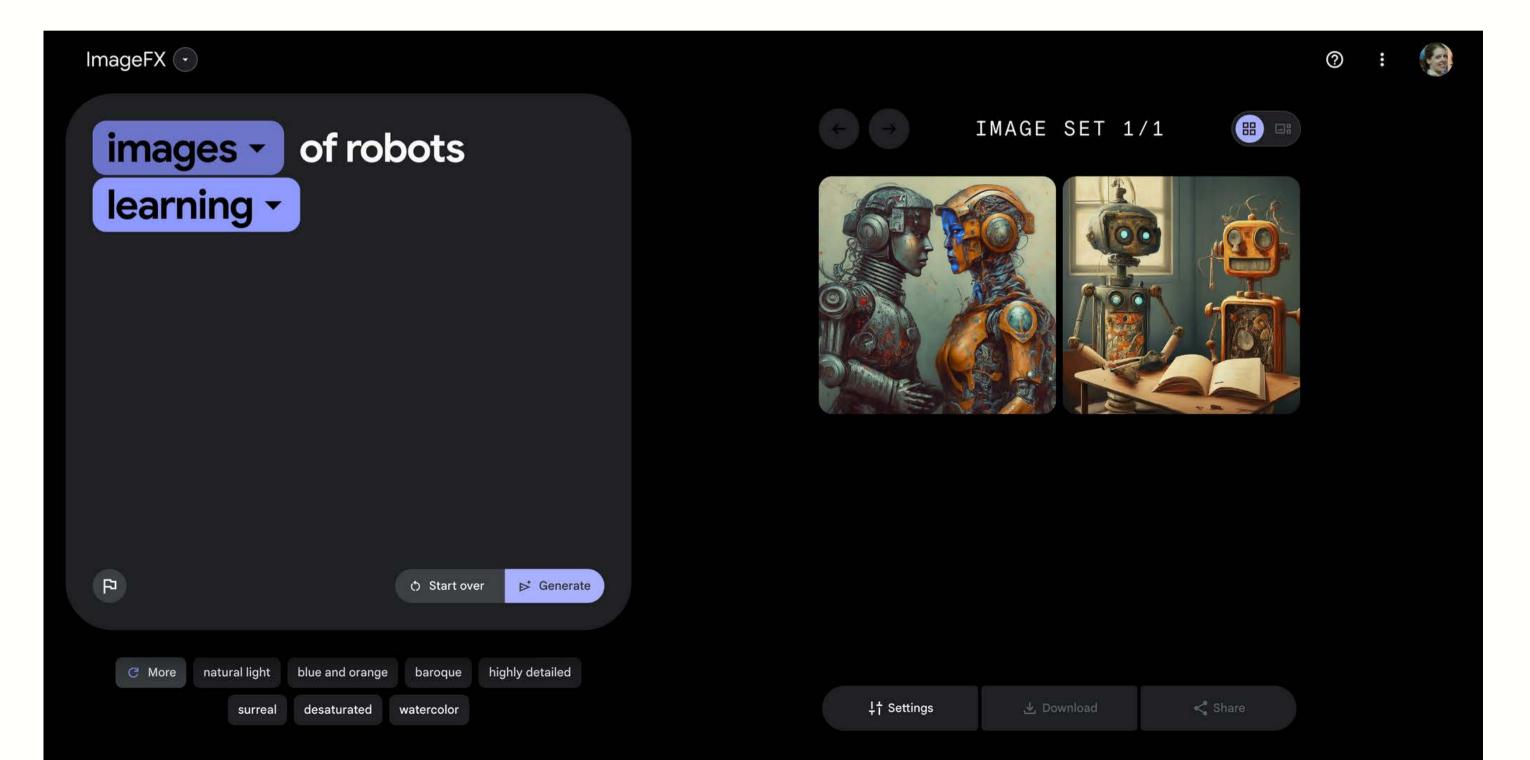


AutoDraw -

<u>AutoDraw</u> - lets users doodle and the AI guesses the drawing and completes the picture. Good for demos, as students can learn the pros and cons of AI by using the tool. Developed by Google Creative Lab.

AI Tool - Google's FX Image Generator

<u>Google's AI Text Kitchen FX Image Generator</u> - lets users experiment with generating images for free using AI. Experiment with image styles and more.



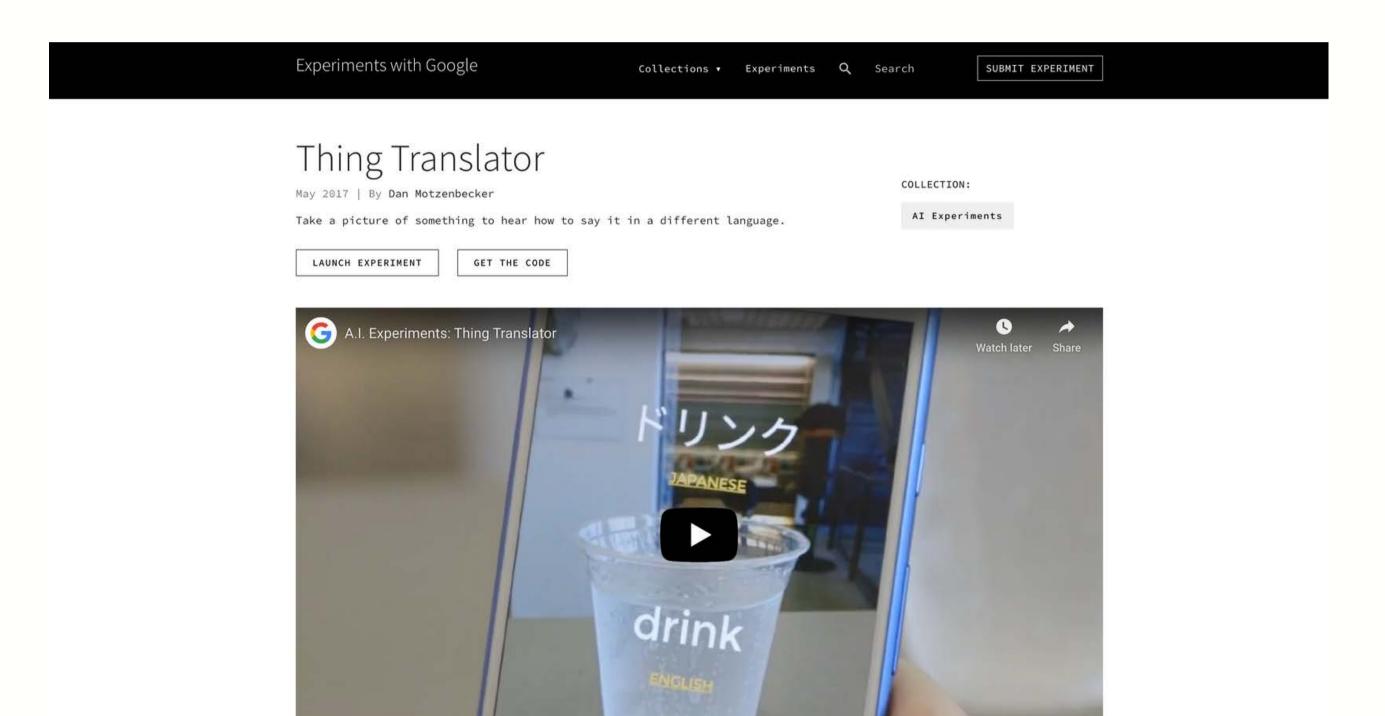
Featured AI Tool - Instrument Playground

<u>Instrument Playground</u>- lets users create music by specifying an adjective and musical instrument. The AI produces a sound bite that users can download. Google AI Experiments, free



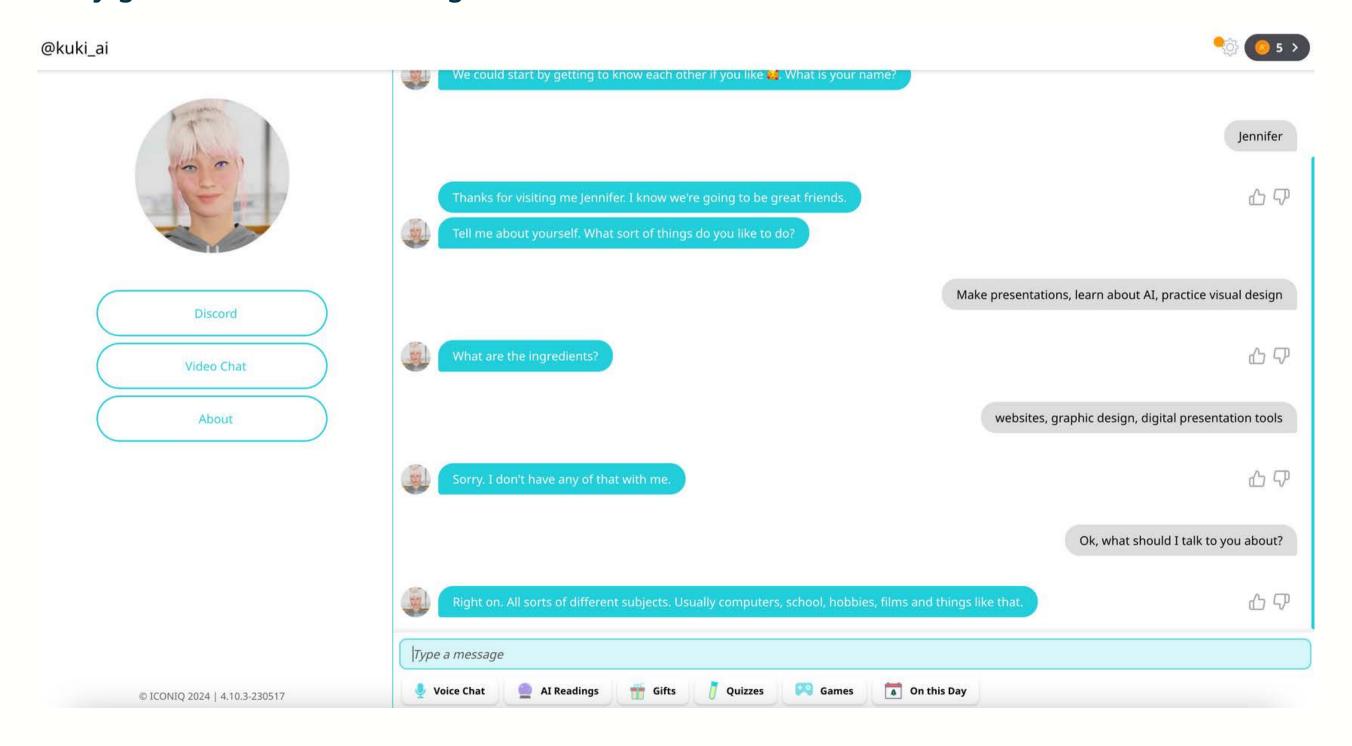
Featured AI Tool - Thing Translator

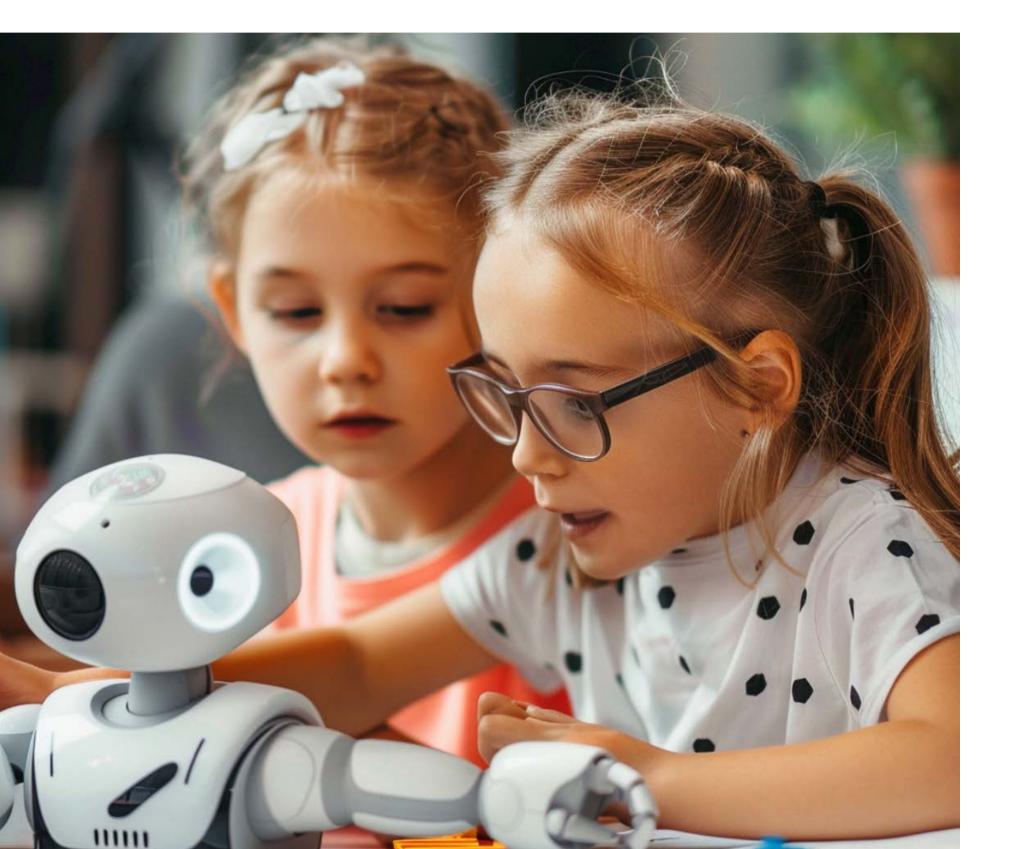
<u>Thing Translator</u> - lets users take pictures of things over a computer or mobile device and the AI will identify the item. Perfect for AI demos. Run by Google's machine learning API's, Free



Featured AI Chatbot Tool - Talk to Mitsuku

Mitsuku - One of the most advanced AI chatbots. Sign up to talk for free. Voice, text, video chat. Play games & learn new things. Works on Discord.





AI Tools for Inclusive Educational Support

Topics Covered

- AI Tools for Dyslexia & Reading Support
- AI Tools for Writing Support
- AI Tools for Math Support
- AI Tools for Artistic Support & Art Therapy
- AI Infused Projects

Dyslexia + Reading Support

- Natural Read AI-infused text-to-speech, free trial
- <u>Speechify</u> AI tools reads to users
- <u>Eleven Labs</u> Converts text to speech with free web-based generator. AI text-to-voice software, free trial
- <u>Diffit</u> a differentiation tool that uses AI to rewrite text at different reading levels, translate content, and generate definitions and questions related to the text, pricing for schools, educators



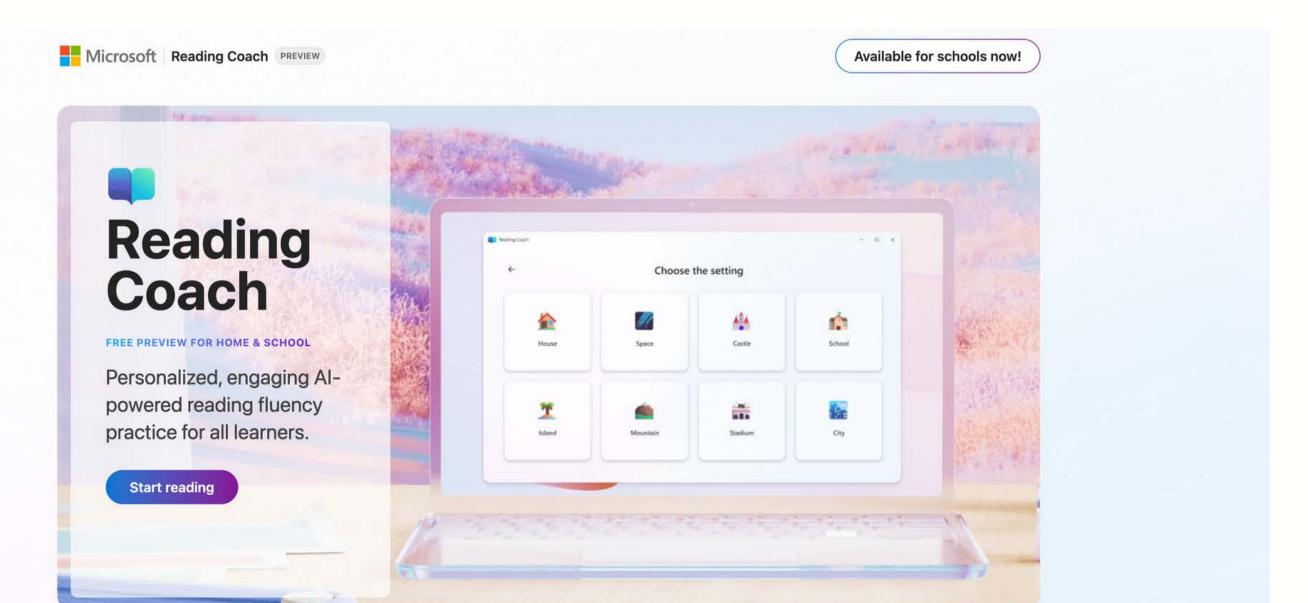
Learning resources for all.

Teachers use Diffit to get "just right" instructional materials, saving tons of time and helping all students to access grade level content

Teachers Start Here

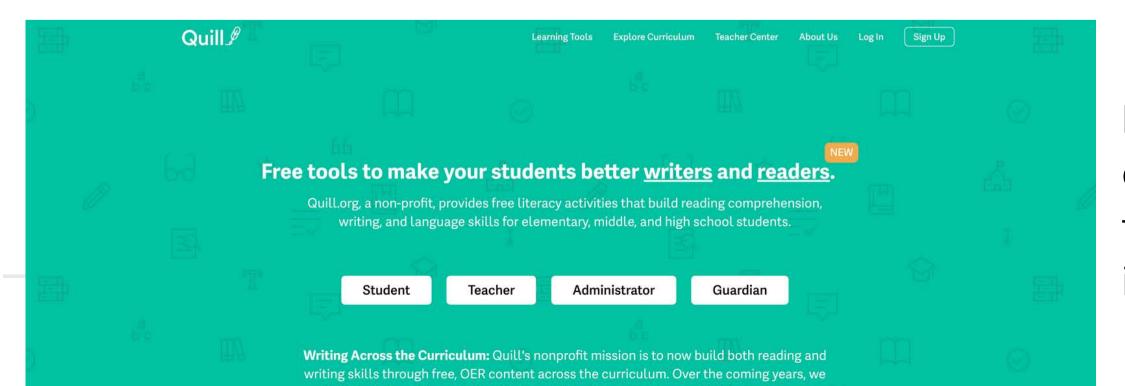
Featured Tool - Microsoft's Reading Coach

<u>Microsoft's Reading Coach</u> - assists children with reading with audio input and AI designed assessment with words that need to be practiced. One mode let's children make their own story by choosing characters, etc. Another mode let's user's upload their own text to the platform, allowing students to practice reading home work assignments at home.



Writing Support

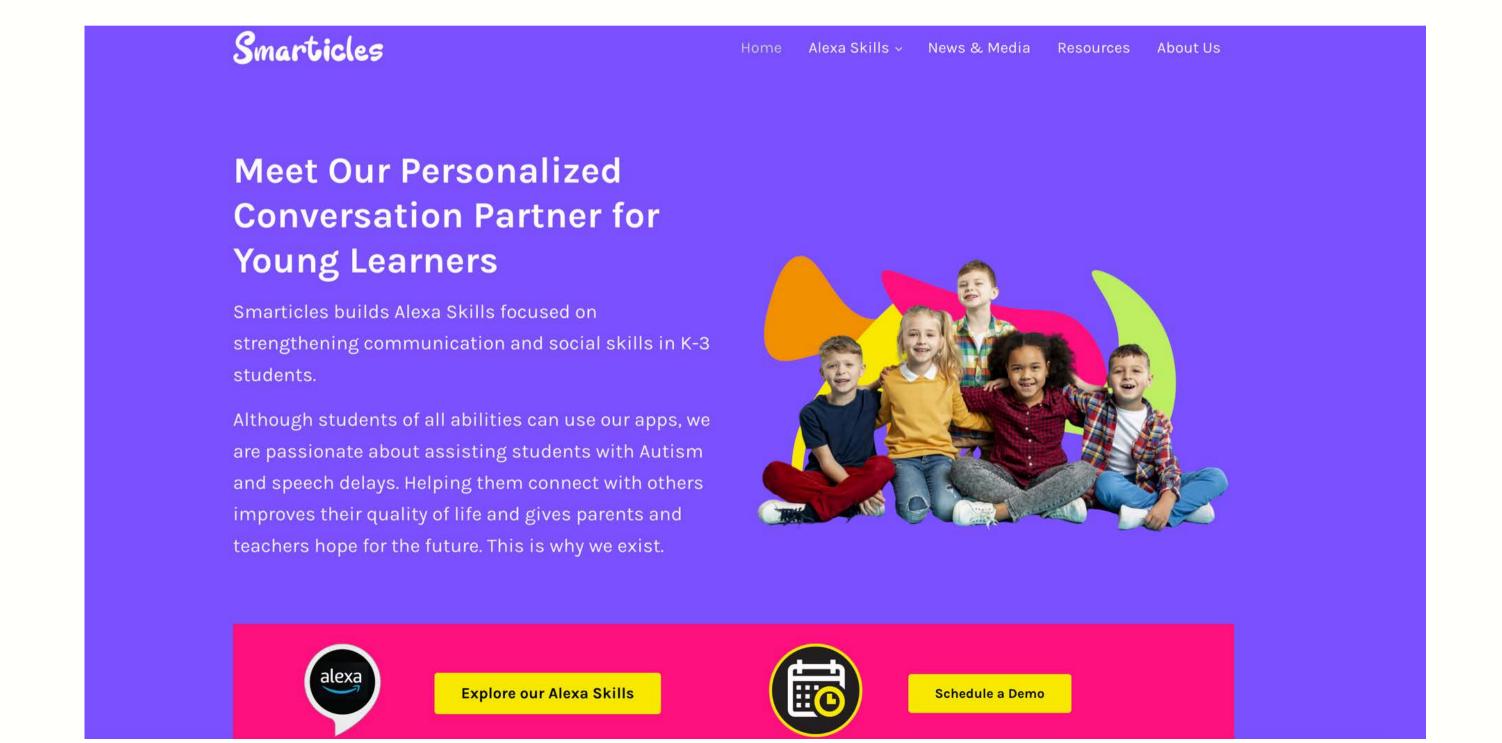
- Quill non profit organization that offers free literacy tools to make students better writers and learners
- Grammarly AI infused grammar checker, plagiarism support, etc
- Hemingway Editor free app and web based platform that helps support writing
- Notion AI best for notetakers
- Audio Pen Free audio to text transcriber
- Google Live Transcribe transcribe classroom lectures live for free
- Google Translate One of the best free multilingual translation tools with AI



Helpful Tip: AI plagiarism checkers claim to be 99% accurate. Testing the platforms show up to 30% inaccuracy rate.

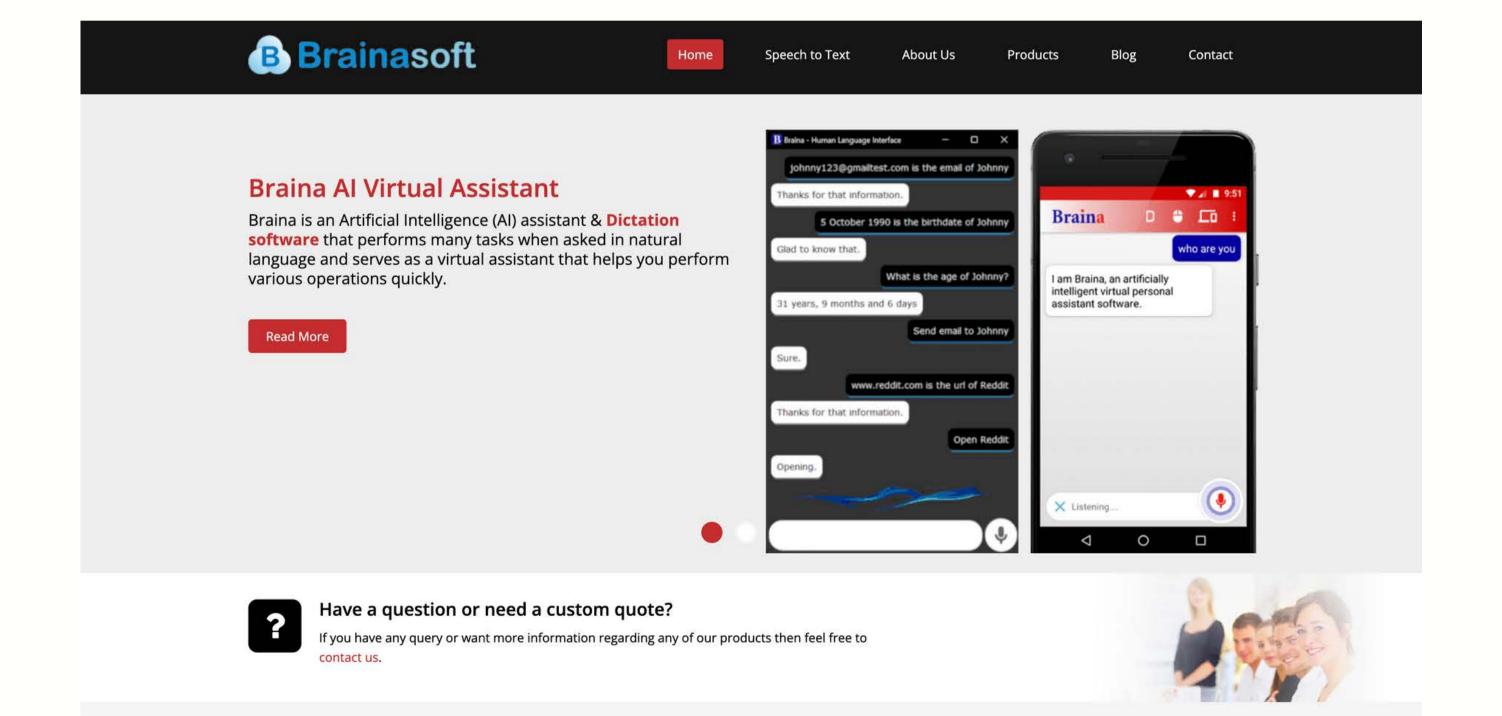
Featured Tool - Smarticles

<u>Smarticles</u> - Turning Amazon Alexa into a conversation partner for young learners who struggle with social interactions. Evidence based activities. Contact for pricing.



Featured Tool - Braina

<u>Braina</u> - Marketed as a personal assistant that helps with productivity and accessibility. Dictation software, text-to-speech functionality. Freemium version.



AI Tools for Visual Support

- Lookout (Google App) free ai-infused assisted vision app.
- <u>Seeing AI (Microsoft)</u> free app for visually impaired people that narrates the world around you, including reading text out loud.
- <u>Beeline Reader</u> Marketed as an AI tools to read faster and easier, on digital devices, all day long, free chrome extension.
- Google Lens Article from Perkins School for the Blind, free app let's users search and identify what they see.



Seeing Al

An app for visually impaired people that narrates the world around you



AI Tools for Math Support

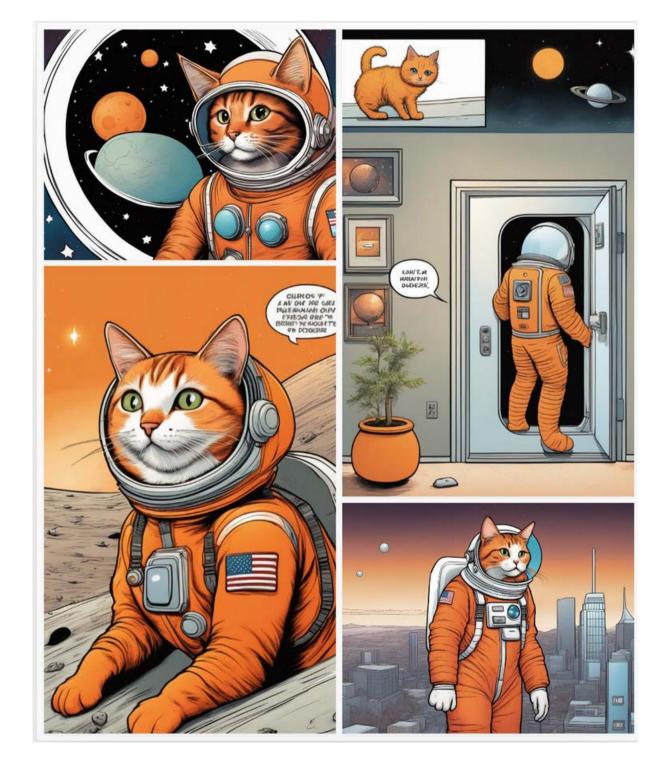


- Khanmigo Khan Academy learning assistant, only \$4 a month
- Mathway free web-based AI-infused service that helps solve math equations
- Microsoft Math Solver web-based AI tool and apps that help solve math equations, all free

Helpful Tip: What is an AI hallucination? It's when an AI tool makes up an answer that's inaccurate, but insists that it's correct. Our advice it to always verify that answers are correct.

AI Tool for Art Support & Art Therapy

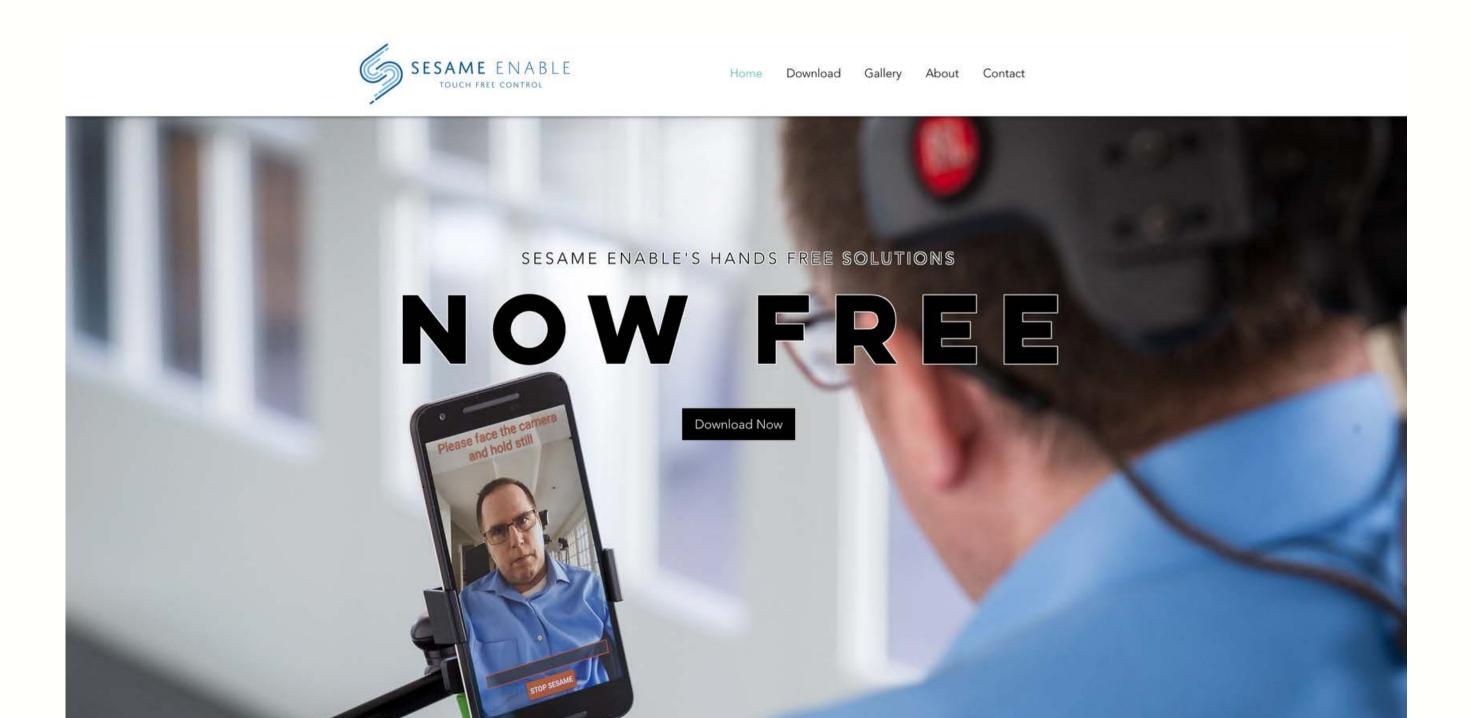
- DeepThInk (coming soon) AI brush designed for Art Therapy
- <u>AutoDraw</u> created by Google, draws simple drawings based on users' doodles
- <u>MidJourney</u> one of the best image generators, originally developed to create sci-fi graphics.
- <u>Canvas by Nvidia</u> An excellent instrument for turning simple brushstrokes into landscape drawings and pictures using different styles.
- <u>AIComicFactory</u> free web-based AI tool that creates a whole comic strip based off of a single prompt. Premium version lets users add dialogue.



Fun Fact: Open AI created Sora (coming soon) that turns text prompts into video.

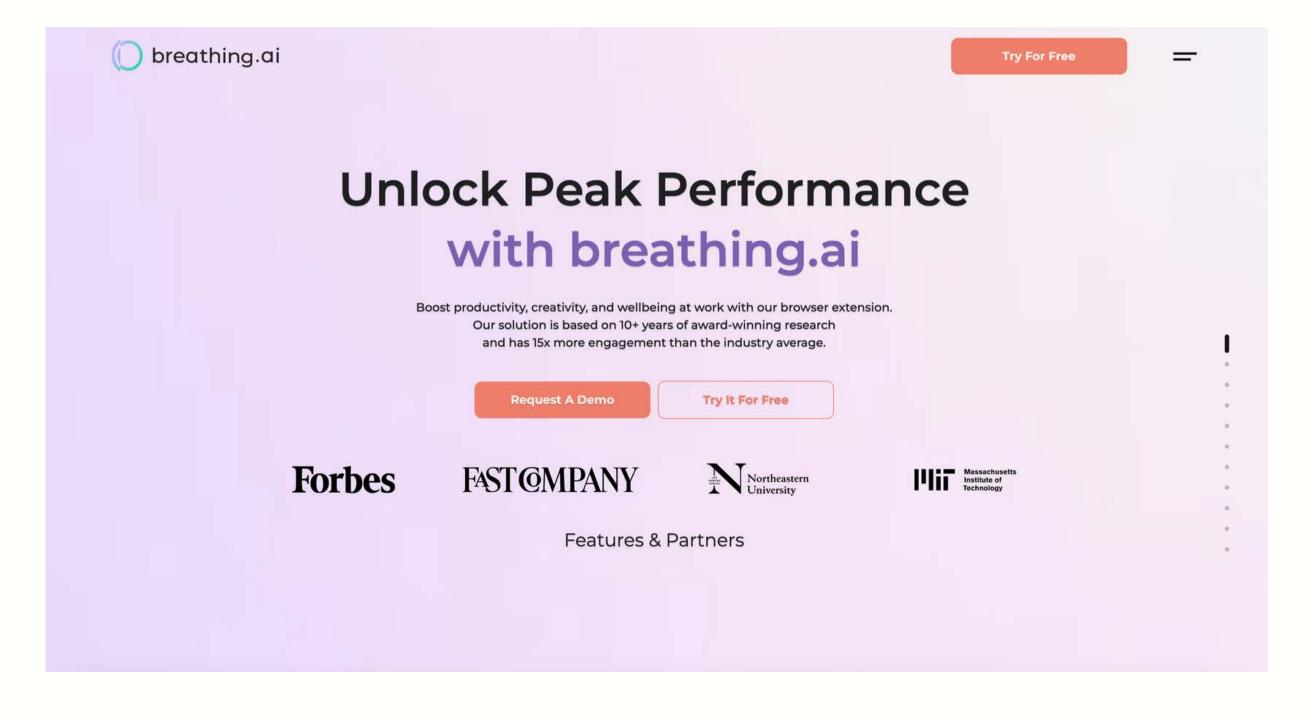
Featured Tool - Sesame Enable

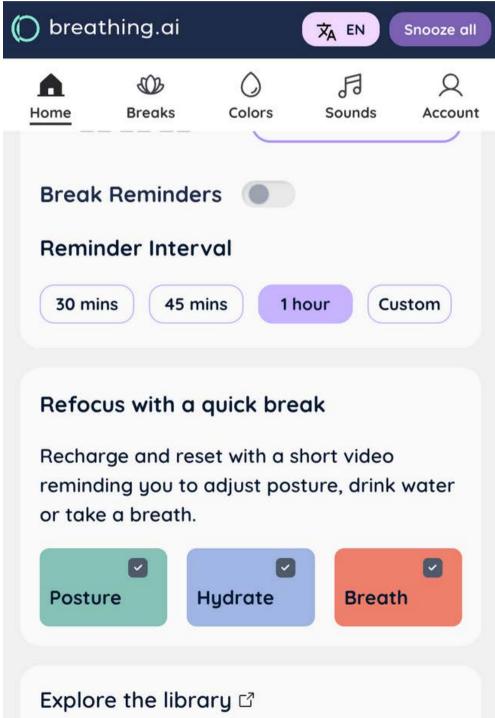
<u>Sesame Enabled</u> - For mobility support, uses AI for touch free control of mobile devices. Free & paid versions.



Featured Tool - Breathing.ai

<u>Breathing.ai</u> - Designed for older students in mind, work wellbeing companion app, monitors users patterns and suggests mental health exercises. Free chrome extension, gives breaks suggestions, color filters, relaxing music, and breathing reminders.





ChatGPT Demo for Inclusive Educational Experiences

Use **ChatGPT 3.5** (free version) to ask about creating an inclusive lesson plans to help with [insert extra support criteria].



Example prompts:

- "Please create a lesson plan for a 2nd grader with Dyslexia to learn about outer space with lots of breaks."
- "Please create a homework schedule for a 5th grader with ADHD who positive reinforcement and rewards for extra motivation."
- "Please create a dynamic and engaging sensory-friendly story time for children with diverse special educational needs, such as visual impairments, neurodiversity, and mobility issues for grades 1 3."

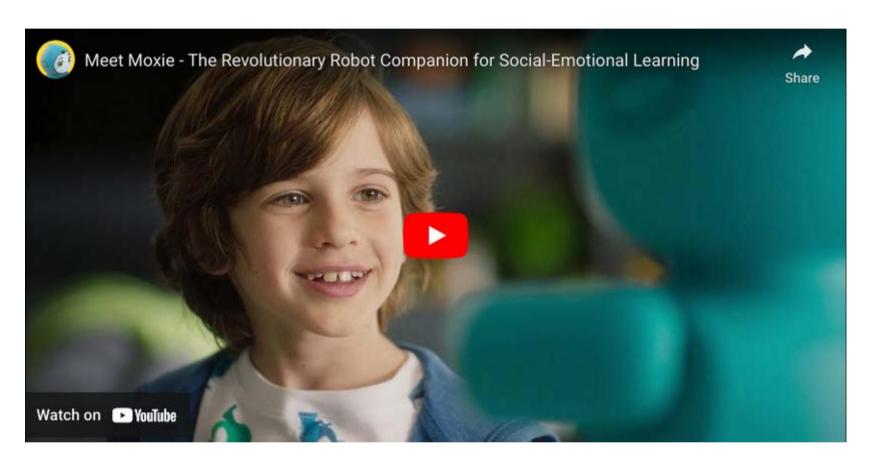


AI Tools for Executive Functioning & Emotion Regulation

Topics Covered

- AI Tools for Executive Functioning & Regulation
- AI Tools for Building Social Emotional Skills
- AI Tools for Creating Social Stories

AI Infused Robotics for Autism





Moxie Robot-

Designed to promote children's mental health, socialemotional learning skills. \$600+ for new and refurbished models.

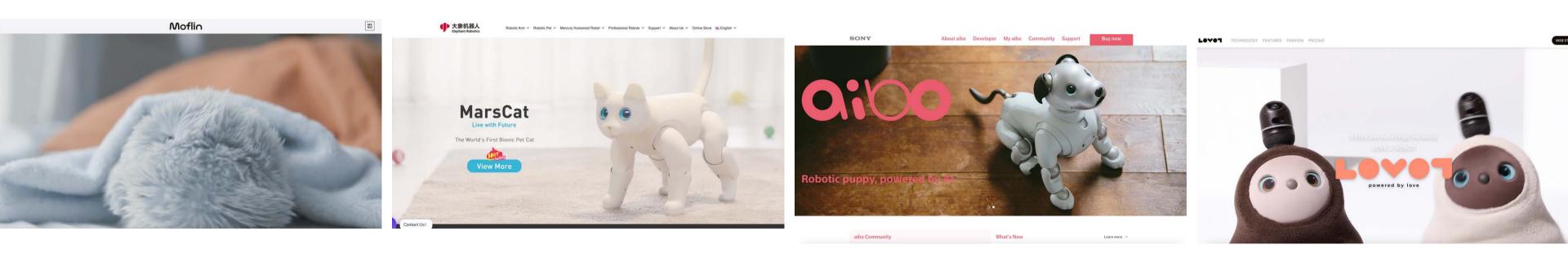
Lux AI's QT Robot -

Pricier Robot built for children with autism, advanced sensing and processing skills. Approx. \$2,000 for parents, \$3,000 for schools

Interesting Fact: According to research, children with autism may engage more readily with robots.

AI Pets - Lovable Companions

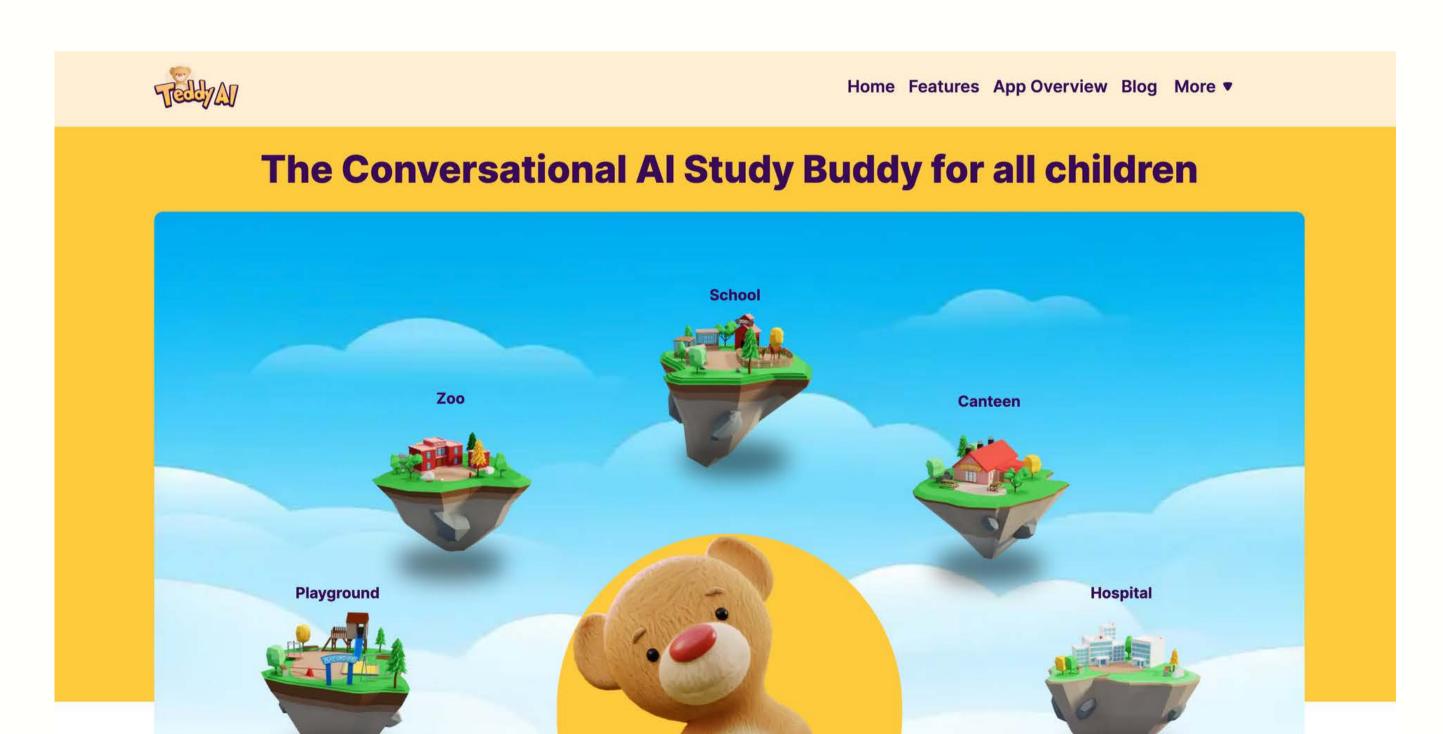
- Moflin Not available for purchase yet, form emotional attachment to owner
- MarsCat Bionic AI infused cat created by Elephant Robotics, cat like behavior, gets more advanced over time
- Sony Aibo Robotic AI infused dog claims to have autonomy and form own personality over time
- <u>Lovot</u> Japanese made robot made for people with dementia, very human-like



Fun Fact: Did you know that researchers are using AI to communicate with animals in the future?

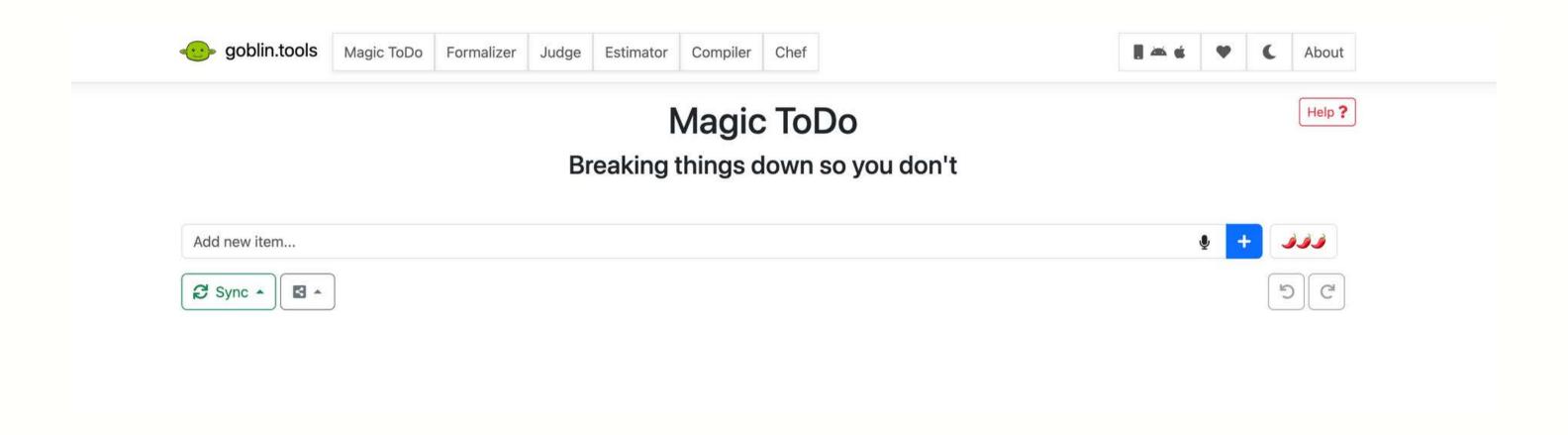
Featured Tool - Teddy.AI

<u>Teddy.ai</u> - AI infused app and web based service study buddy for children. Educational, helps with emotion regulation and time management skills. Free.



Featured Tool - Goblin. Tools

<u>Goblin.Tools</u> - Free web-based AI tools designed by a neurodiverse computer scientists to help with executive functioning. Tools helps break tasks down into more manageable tasks and assist with estimating the time a certain task may take.



AI Infused Social Stories

"Social Stories were devised as a tool to help individuals with ASD better understand the nuances of interpersonal communication so that they could "interact in an effective and appropriate manner." - Wikipedia

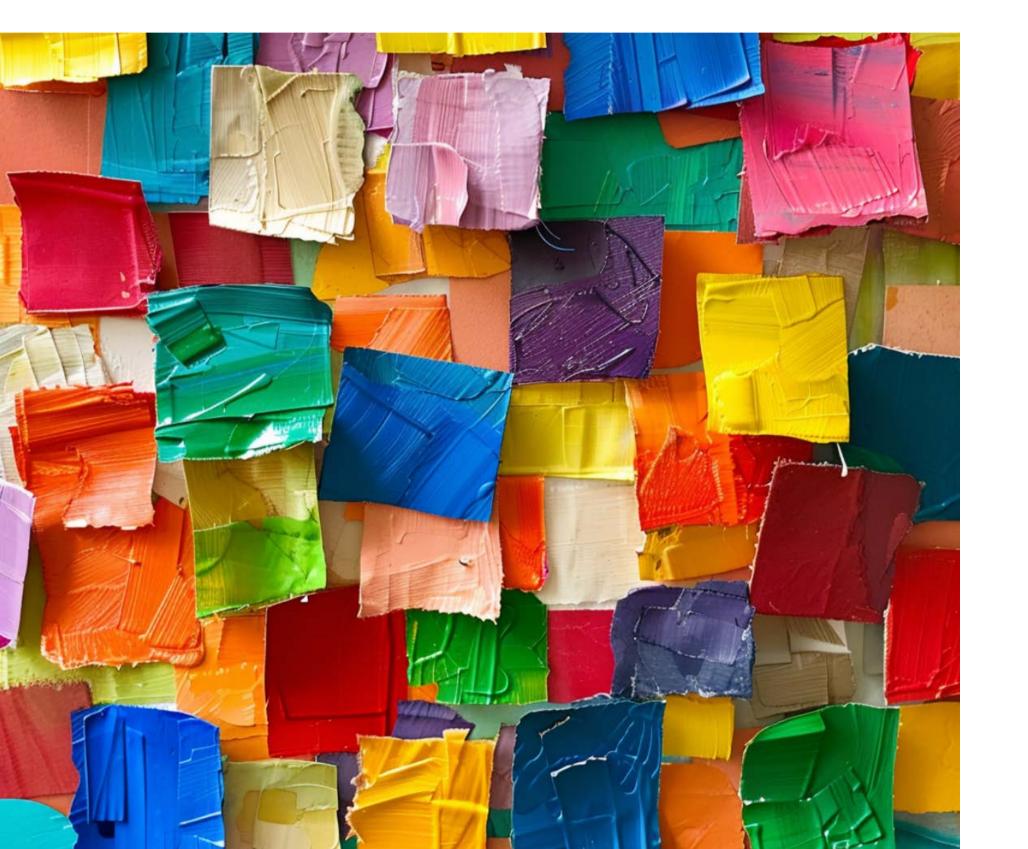
- <u>Ella</u> create social stories, 5 stories a month for free
- Magic School AI social stories generator
- **Spark Story** create a social story for free

Ease the stress of unfamiliar situations

New situations, like flying, medical check-ups, or new places, can create unease. Be prepared by offering kids previews through simple stories and compelling visuals.

See this story





Creating Educational Projects with AI

Topics Covered

- Create a Fantasy World with AI
- Create a Custom Storybook with AI
- Create Custom Coloring Sheets with AT
- Free AI Educational Resources & AI Tools Directories

Create an AI-Infused Fantasy World

- Use world building AI tool, **World Building**, to create the text of a world with environment, characters, story plot line, etc.
- Use an AI image generator like MidJourney to create the fantasy world's image.
- Try AIDungeon for building a online game fantasy world that you can build and play.



Create a Custom Storybook with AI

- <u>BookBildr</u> picture book creation tool that is marketed as an educational tool. Create a book with AI generators and then pay for the printed book.
- CreateBookAI Create a children's illustrated book in 5 minutes.
- Pair MidJourney + ChatGPT + Canva Get a high quality book using Canva's free book templates.



Make a Children's Story Book with Pictures Online

Choose a Format

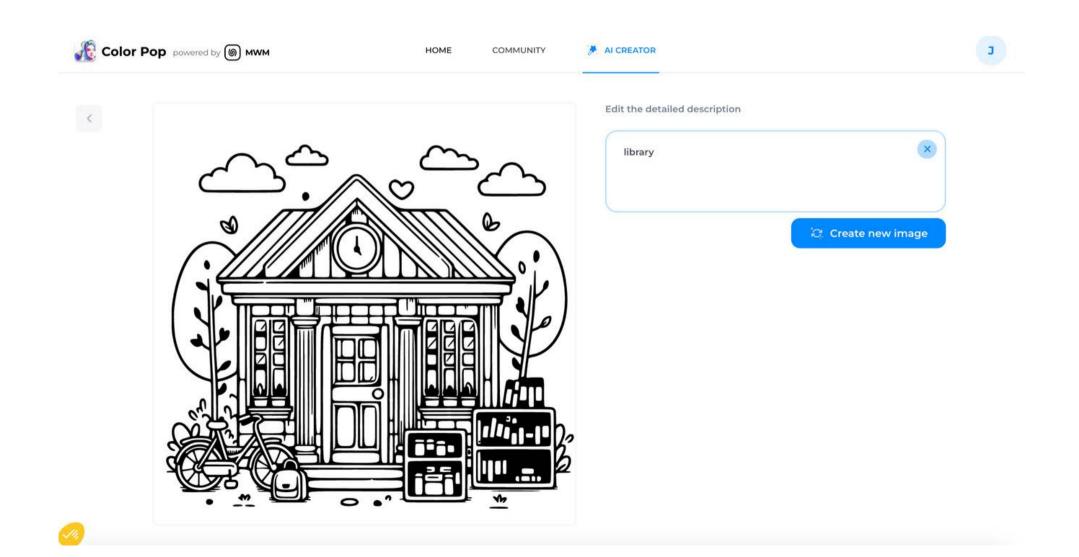
Write and Illustrate

Print or Download

Wait for Your Delivery

AI Tools for Creating Coloring Pages

- <u>MidJourney</u> + Canva free and paid versions of MidJourney, may need to resize images to a larger scale
- Leonardo.ai Freemium, works on Discord
- Color Pop AI Free app, must sign up with an email account, coloring pages are ready to go within minutes

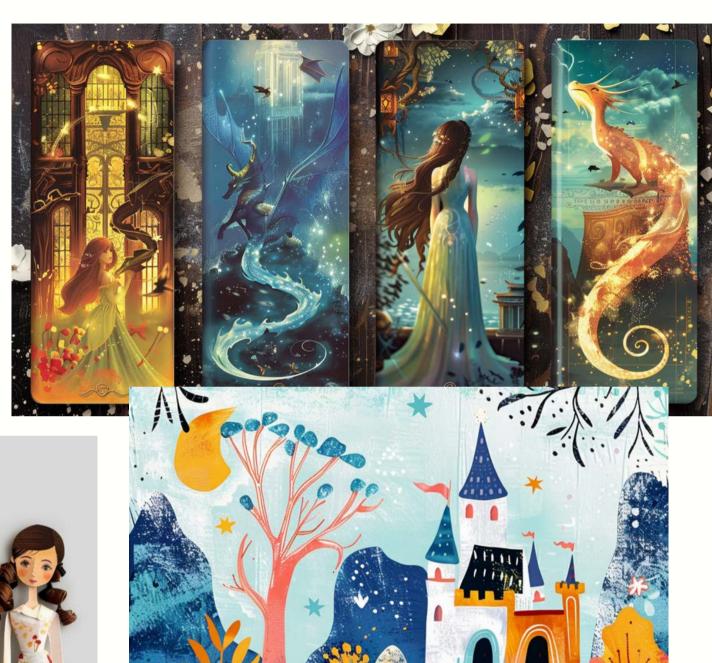


AI Art Project Ideas

Use an AI image generator like Midjourney / DALL-E to generate:

- Paper Dolls & Popsicle Stick Dolls
- Art Collage
- Book Marks
- Paper Lanterns
- Paper Masks
- Board Games
- Backdrop for Shoebox Murals
- Holiday Themed Printables
- Stickers!



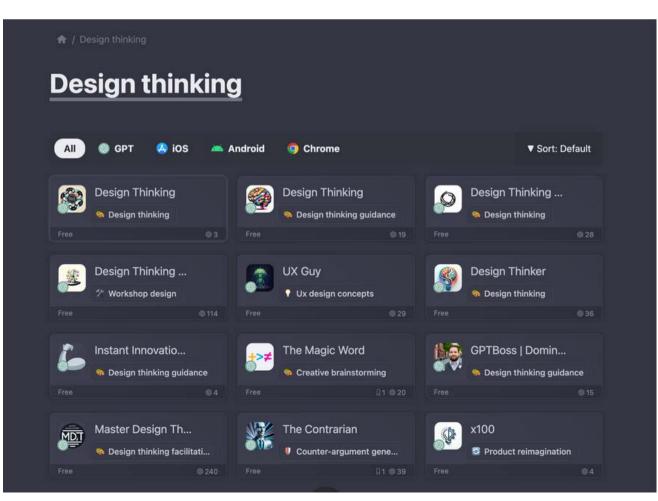


Free AI Tool Resources

- Texas Tech's Library AI Guide -
- Top AI Tools
- Futurepedia Largest AI directory with tools
- Future Tools AI directory with categories
- There's an AI for That free tool that let's you search for AI tools.

Free AI Courses:

- Elements of AI
- Andrew Ng's Course in Coursera





"Artificial intelligence is not a substitute for human intelligence; it is a tool to amplify human creativity and ingenuity."

-Dr. Fei Fei Li

Founder of ImageNet, the dataset that enabled rapid advances in computer vision in the 2010s

Thank you for attending!

Q & A

We hope you can join us again on our next SEPAC meeting.



Feel free to reach out or ask Jennifer or Phil (SEPAC chairs) questions: pvcicssepac@pvcics.org