500+

GenerativeAI

Projects

tools, artworks, and models

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https://www.linkedin.com/in/hemansnation/
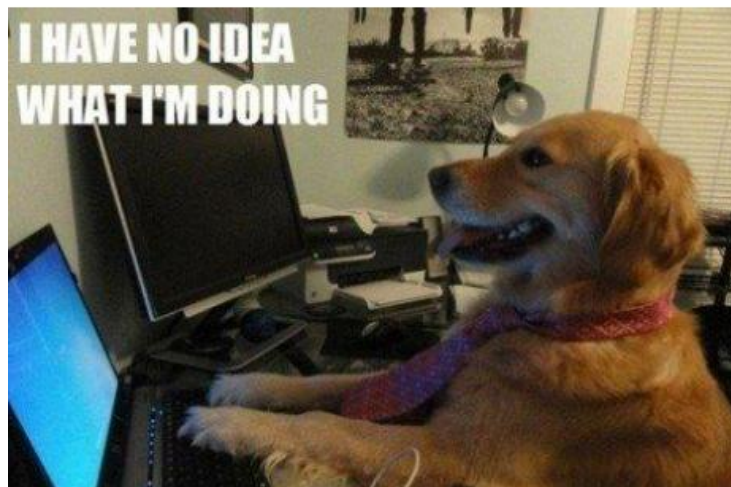
Credit:

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    - Promptism
  - Image Synthesis
    - DALL-E 2

Repository Introduction

Welcome to our Awesome List of Generative AI resources! This repository is a curated collection of references in the dynamic field of Generative AI, equipped with various sources such as academic papers, technical articles, online courses, tutorials, and software.

Structure:

1. Sections: Each section represents a different Generative AI-related category (e.g., LLMs, prompt engineering, image synthesis, educational resources, etc.). The Inboxes are the more general references of a category. When a new category emerges, it becomes a specific subsection.
2. References within sections: Inside each section, references are listed in reverse chronological order, with the most recent one at the top. This order signifies the ever-evolving landscape of Generative AI, keeping you up-to-date with the latest developments.

This repository is designed to offer you the most recent advancements at your fingertips, allowing you to explore the depth of older resources at your own pace. It's regularly updated, ensuring you're always on track with the rapidly progressing world of Generative AI.

Contribute to Our Repository

Your contributions are welcome and greatly appreciated! If you have a valuable resource that you believe should be on this list, or if you see any outdated information, please make a Pull Request. This will help us maintain the quality and relevance of our Awesome List.

Follow this roadmap, keep learning, and enjoy your journey through Generative AI!

The Generative AI Area: history, maps, and definitions

- [The Next Token of Progress: 4 Unlocks on the Generative AI Horizon | Andreessen Horowitz](#)
- [The state of AI in 2023: Generative AI's breakout year | McKinsey](#)
- [A jargon-free explanation of how AI large language models work | Ars Technica](#)
- [The Generative AI Revolution: Exploring the Current Landscape | by Towards AI Editorial Team | Jun, 2023 | Towards AI](#)
- [The Story of AI Winters and What it Teaches Us Today](#)
- [There Would Have Been No LLMs Without This (episode#3 in the History series)](#): timeline of LLMs by Turing Post

- [The Next Token of Progress: 4 Unlocks on the Generative AI Horizon | Andreessen Horowitz](#): critical innovations on the horizon: steering, memory, ability to use tools, and multimodality
- [The economic potential of generative AI: The next productivity frontier](#): report by McKinsey Jun 2023
- [A survey of Generative AI Applications | arxiv](#): "this survey aims to serve as a valuable resource for researchers and practitioners to navigate the rapidly expanding landscape of generative AI"
- [Paper Digest - ChatGPT](#): Recent Papers on ChatGPT
- [AI Index Report 2023 – Artificial Intelligence Index](#): report that measures trends in AI written by the Human-Centered Artificial Intelligence from Stanford University
- [A Survey of Large Language Models](#): paper that summarizes the evolution of language models, with a focus on LLMs, discussing their advances, techniques, and impact on AI development and usage
- [The Generative AI Timeline](#): post in Linkedin by David Foster
- [Who Owns the Generative AI Platform? | Andreessen Horowitz](#): this article discusses the generative AI market and presents an interesting technology stack of the area
- [A Comprehensive Survey of AI-Generated Content (AIGC): A History of Generative AI from GAN to ChatGPT | arxiv](#)
- [🔥🔥] [Toward General Design Principles for Generative AI Applications](#): this paper presents a set of seven principles for the design of generative AI applications
- [🔥] [The landscape of generative AI landscape reports | by Ramsri Goutham | Jan, 2023 | Medium](#): a meta report on the reports published by 9 venture capital firms
- [Generative AI with Cohere: Part 1 - Model Prompting](#): overview of Generative AI by Cohere AI
- [Generative AI with Cohere: Part 2 - Use Case Ideation](#): a list of Generative AI use cases by Cohere AI
- [Large Language Models and Where to Use Them: Part 1](#): a list of LLM use cases by Cohere AI
- [Large Language Models and Where to Use Them: Part 2](#)
- [What's the big deal with Generative AI? Is it the future or the present?](#): summarization of the area of Generative AI by Cohere AI
- [Timeline of AI and language models](#): LLM timeline organized by Dr Alan D. Thompson from Life Architect

- [A Comprehensive Survey on Pretrained Foundation Models: A History from BERT to ChatGPT | arxiv](#)
- [A Review of Generative AI from Historical Perspectives](#): paper by Dipankar Dasgupta, Deepak Venugopal and Kishor Datta Gupta
- [Matt Shumer on Twitter: "The definitive AI market map Twitter thread"](#): "The definitive AI market map Twitter thread"
- [🔥] [Base11 Research - generative-ai](#): report about Generative AI produced by the investment firm Base10
- [Engines of Wow: AI Art Comes of Age – Steve Murch](#)
- [AI exploded on the scene at the end of 2022 / Twitter](#): categories for analyzing tools of Generative AI
- [🔥🔥🔥] [Mapping the Generative AI landscape | Antler](#)
- [🔥🔥🔥] [AI Timeline](#): A history of text-to-image ML models by Fabian Mosele
- [AI-Generated Art](#): From Text to Images & Beyond Examples
- [1 week of Stable Diffusion | multimodal.art](#)

Generative AI Processes and Artifacts

Generative AI Elements v0.0.1
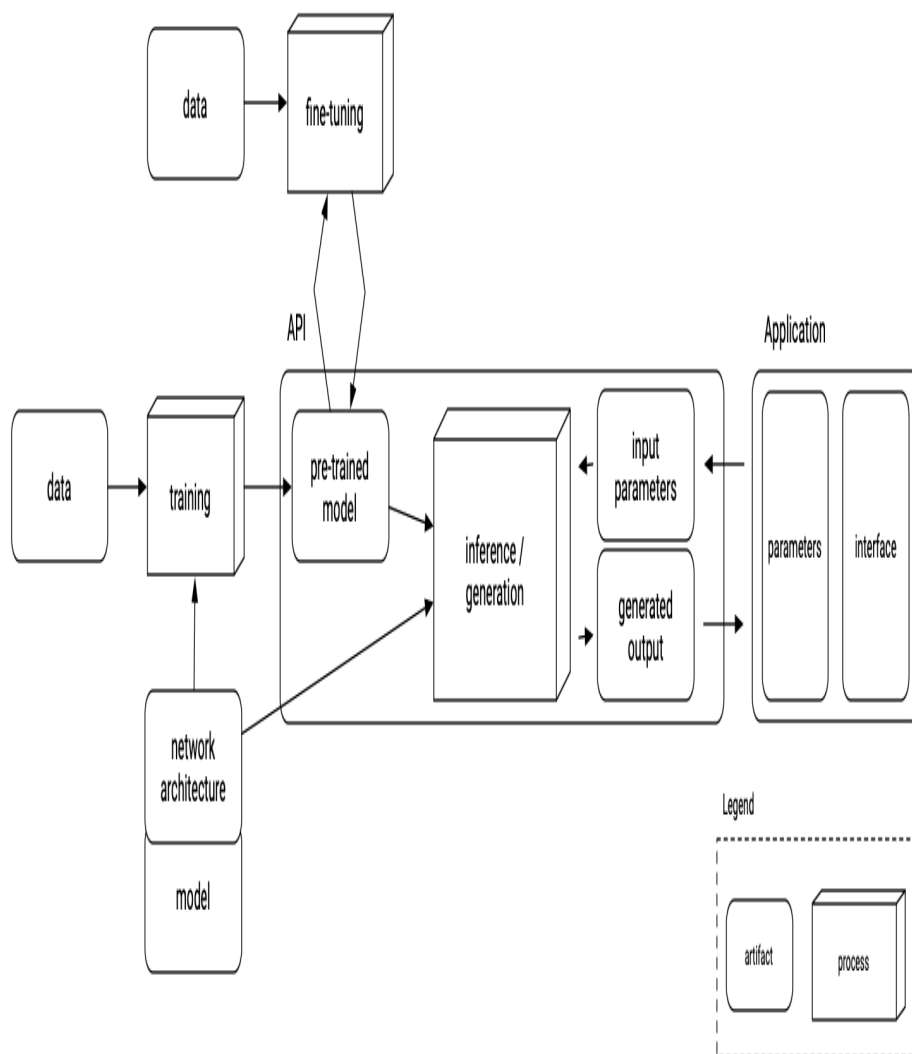
Generative AI Tools Directories

- Technologies in LabLab: list of AI tools suggested by lablab.ai for their hackathons
- Vondy - Next Generation AI Apps: collection of AI tools organized by tasks
- AI Tool Master List: directory maintained by ClickUp
- AI Valley: "The Newest AI Tools And Prompts"

- AI Finder: repository with more than 1500 AI tools
- BestWebbs: "one-stop destination for all AI Tools"
- Future Tools - Find The Exact AI Tool For Your Needs: list of AI tools
- Futurepedia - The Largest AI Tools Directory | Home: directory of AI tools
- There's An AI For That: AI database
- AI Depot - Discover New AI Tools: collection of AI tools organized by tags and presented in a card format
- Generative AI Database: a database in Notion with types, models, sectors, URLs, and APIs

Inbox: Large Language Models (LLMs)

- The TextFX project: "AI-powered tools for rappers, writers and wordsmiths" (partnership between Lupe Fiasco and Google)
- A jargon-free explanation of how AI large language models work | Ars Technica
- [🔥🔥🔥] What We Know About LLMs (Primer)
- A simple guide to fine-tuning Llama 2 | Brev docs
- microsoft/semantic-kernel: integrate cutting-edge LLM technology quickly and easily into your apps
- CoPrompt: platform for teams to use ChatGPT together
- [🔥🔥🔥] Emerging Architectures for LLM Applications | Andreessen Horowitz: "a reference architecture for the emerging LLM app stack"
- Advanced Guide to ChatGPT: guide by Neatprompts.com
- Falcon LLM - Home: a foundational large language model (LLM) with 40 billion parameters trained on one trillion tokens shared by Technology Innovation Institute from Abu Dhabi
- [🔥🔥🔥] The Hugging Face Open LLM Leaderboard: "the 🤗 Open LLM Leaderboard aims to track, rank and evaluate LLMs and chatbots as they are released"
- google/BIG-bench: "a collaborative benchmark intended to probe large language models and extrapolate their future capabilities"
- togethercomputer/OpenChatKit: provides an open-source base to create both specialized and general purpose chatbots for various applications
- Paper Digest - ChatGPT: Recent Papers on ChatGPT

- [Let Us Show You How GPT Works — Using Jane Austen - The New York Times](#)
- [Search-in-the-Chain: Towards Accurate, Credible and Traceable Large Language Models for Knowledge-intensive Tasks | arxiv](#): "a novel framework called Search-in-the-Chain (SearChain) to improve the accuracy, credibility and traceability of LLM-generated content for multi-hop question answering"
- [🔥🔥🔥] [Mooler0410/LLMsPracticalGuide](#): list of practical guide resources of LLMs based on the paper [Harnessing the Power of LLMs in Practice: A Survey on ChatGPT and Beyond](#)
- [hpcaitech/ColossalAI](#): Making large AI models cheaper, faster and more accessible
- [microsoft/LoRA](#): Code for loralib, an implementation of "LoRA: Low-Rank Adaptation of Large Language Models"s
- [kyrolabs/awesome-langchain](#): 😎 Awesome list of tools and project with the awesome LangChain framework
- [Stability AI Launches the First of its StableLM Suite of Language Models — Stability AI](#)
- [Free Dolly | The Databricks Blog](#): open source, instruction-following LLM, fine-tuned on a human-generated instruction dataset licensed for research and commercial use
- [Summary of ChatGPT/GPT-4 Research and Perspective Towards the Future of Large Language Models](#): paper with "a comprehensive survey of ChatGPT and GPT-4 and their prospective applications across diverse domains"
- [lm-sys/FastChat](#): The release repo for "Vicuna: An Open Chatbot Impressing GPT-4" [[demo](#)]
- [🔥🔥🔥] [oobabooga/text-generation-webui](#): a gradio web UI for running Large Language Models like GPT-J 6B, OPT, GALACTICA, LLaMA, and Pygmalion
- [Why LLaMa Is A Big Deal | Hackaday](#): post that discusses the impact of LLaMa and Alpaca in popularizing LLMs and even using them in small hardware devices
- [logspace-ai/langflow](#): a UI for LangChain, designed with react-flow to provide an effortless way to experiment and prototype flows
- [More than you've asked for: A Comprehensive Analysis of Novel Prompt Injection Threats to Application-Integrated Large Language Models](#): paper on LLM Security

- [Cohere AI](): a way to integrate state-of-the-art language models to applications
- [Langchain for paper summarization](): using langchain to build a app for paper summarization
- [Red-Teaming Large Language Models | Hugging Faces](): strategies for testing LLMs against jailbreaks and attacks
- [hwchase17/langchain](): "building applications with LLMs through composability"
- [Top Large Language Models (LLMs) in 2023 | MarkTechPost](): list with large language models from diverse companies
- [Godly](): Instant context for GPT3
- [GPTZero](): "Detect AI Plagiarism. Accurately"
- [GPT-3 Apps](): GPT-3 Powered Micro Products (ex: cat namer, poet pocket, summarize)
- [Inside language models (from GPT-3 to PaLM) – Dr Alan D. Thompson – Life Architect]()
- [Google AI Blog: Pathways Language Model (PaLM): Scaling to 540 Billion Parameters for Breakthrough Performance]()
- [DeepMind says its new language model can beat others 25 times its size | MIT Technology Review]()
- [Integrated AI: How to talk to AI for free using nine platforms (Megatron, GPT-3, GPT-J, Wudao, J1..) - YouTube]() by Dr Alan D. Thompson. The following references came from this video description
- [Haystack](): framework for building applications with LLMs and Transformers (e.g. agents, semantic search, question-answering)
- [SolidUI](): AI-generated visualization prototyping and editing platform, support 2D, 3D models, combined with LLM(Large Language Model) for quick editing.

Autonomous LLM Agents

- [AgentBench: Evaluating LLMs as Agents](): Hugging Face paper page on a benchmark to evaluate LLMs agents
- [geekan/MetaGPT](): the multi-agent framework that, give one line requirement, return PRD, design, tasks, repo
- [GPT Researcher](): AI agents for insights and research
- [Multi-agent Simulation by Jim Fan on Twitter](): "The next frontier of emergent intelligence will be multi-agent simulation: a crowd of AI

characters carry out their daily lives through complex social interactions"

- Introducing AACP | SuperAGI: agent to agent communication protocol
- BrainstormGPT: AI multi-agent problem solving
- ChatArena: building multi-agent environments for LLMs
- [🔥🔥🔥] LLM Powered Autonomous Agents | Lil'Log: the LLM agents learning notes by Lilian Weng
- Vercel for AI agents: "help developers to build, deploy, and monitor AI agents, focusing on specialized AI agents that build software for you - your personal software developers"
- 101dotxyz/GPTeam: "GPTeam uses GPT-4 to create multiple agents who collaborate to achieve predefined goals"
- Fine-Tuner.ai: no code approach to build AI agents
- AI Agent Basics: Let's Think Step By Step - by Jon Stokes
- [🔥🔥] Transformers Agent: provides a natural language API on top of Hugging Face's transformers library
- AgentGPT: "assemble, configure, and deploy autonomous AI Agents in your browser"
- yoheinakajima/babyagi: an AI-powered task management system that uses OpenAI and Pinecone APIs to create, prioritize, and execute tasks
- Torantulino/Auto-GPT: "an experimental open-source attempt to make GPT-4 fully autonomous"
- Generative Agents: Interactive Simulacra of Human Behavior: a paper that presents computational software agents that simulate believable human behavior
- microsoft/JARVIS: JARVIS, a system to connect LLMs with ML community
- HuggingGPT: Solving AI Tasks with ChatGPT and its Friends in HuggingFace

LangChain

- FlowiseAI: "Open source UI visual tool to build your customized LLM flow using LangchainJS, written in Node Typescript/Javascript"
- Langchain for paper summarization
- LangChain Docs: Python library that helps building applications with LLMs through composability

- [Getting started with LangChain | by Avra | Feb, 2023 | Medium](#): A powerful tool for working with Large Language Models

Embeddings and Semantic Search

- [neuml/txtai](#): semantic search and workflows powered by language models
- [facebookresearch/faiss](#): A library for efficient similarity search and clustering of dense vectors
- [Optimize Your Chatbot's Conversational Intelligence Using GPT-3 | by Amogh Agastya | Better Programming](#): tutorial presenting semantic search concepts
- [🔥] [whitead/paper-qa](#): "LLM Chain for answering questions from documents with citations", [demo](#)
- [What is Semantic Search?](#)
- [Learning Center | Pinecone](#): Pinecone's guides to vector embeddings
- [BLIP+CLIP | CLIP Interrogator | Kaggle](#): a Kaggle notebook for image description and captioning (imate-to-text)
- [jerryjliu/gpt_index: GPT Index (LlamaIndex)](#): a project to make it easier to use large external knowledge bases with LLMs
- [Llama Hub](#): a repository of data loaders for LlamaIndex (GPT Index) and LangChain
- [Chroma](#): an open-source AI-native database that makes it easy to use embeddings

LLMOps

- [Eden AI](#): provides a unique API connected to the AI engines
- [Dify](#): LLMOps platform for creating and operating AI-native apps based on GPT-4

ChatGPT

- [Advanced Guide to ChatGPT](#): guide by Neatprompts.com
- [🔥] [104 Growth Hacking Swipe (ChatGPT)](#): set of ChatGPT prompts for design, products and marketing
- [acheong08's list / Awesome ChatGPT](#): list of wrappers for accessing ChatGPT in platform such as Discord, Telegram, and languages such as Python, JS.

- [🔥🔥🔥] Awesome ChatGPT Prompts: repo that includes curated ChatGPT prompts to obtain better results from ChatGPT
- ("Publicly announced ChatGPT variants and competitors: a thread" / Twitter: a Twitter thread by @goodside with alternatives to ChatGPT

GPT-3

- GPT-3 playground
- Fine-tuning GPT-3: how to customize a model for OpenAI's GPT-3
- Top 10 GPT-3 Powered Applications to Know in 2022

BLOOM

- bigscience/bloom · Hugging Face: getting started with BLOOM
- BLOOM: open-source 176-billion-parameter model aims to democratize large-language models

Text-related Generative Tools

- Plus AI for Google Slides: Create AI-powered presentations in Google Slides
- ChatBotKit: toolkit to build AI chat bots
- Boring Report: "an app that uses AI to remove sensationalism from the news and makes it boring to read"
- ChatPDF - Chat with any PDF!: upload a PDF file and make questions about it #semanticsearch
- Character.AI: platform for creating and talking to advanced AI Characters
- SlidesAI: "create presentation slides with AI in minutes"
- Rationale: decision-making tool powered by the latest GPT and in-context learning
- DetangleAI: AI-generated summaries of provided legal docs
- GPT-2 Output Detector: tool that estimate is a given text is real or generated by GPT
- HyperWrite: a personal writing assistant with suggestions and sentence completions
- DeepStory: A tale of co-creation between man & machine
- InferKit
- CopyHat

- Lucid Lyrics - AI Assisted Art: AI-Assisted Lyrical Interpretations by Walter Arnold
- Authors A.I.: AI-powered text analysis
- Rytr: Rytr is an AI writing assistant that helps creating content
- Charisma: Charisma is a platform for creating interactive stories with believable virtual characters
- Riku.AI | The vault for your A.I. creations
- First look - Riku.ai - inference platform Mar/2022 - J1, GPT-3, Fairseq-13B, GPT-NeoX-20B, Cohere-XL - YouTube
- Taskade: Taskade is an AI outliner and mind map generator for teams with built-in AI chat
- AI Story Generator: Free and fast online AI-powered story generator that writes short stories for you

Prompt Engineering | Prompt Design | Prompt Craft

- [🔥🔥🔥] Learn Prompting: series of lessons of prompt engineering
- [🔥🔥🔥] Prompt Engineering | Lil'Log: prompt engineering learning notes by Lilian Weng
- [🔥🔥🔥] ChatGPT Prompt Engineering for Developers - DeepLearning.AI: short course taught by Isa Fulford (OpenAI) and Andrew Ng (DeepLearning.AI) that provide best practices for prompt engineering
- [🔥🔥🔥] Prompt Engineering Guide: a project by DAIR.AI that intends to educate researchers and practitioners about prompt engineering
- the Book: collection of prompts and hints of prompt engineering
- dair-ai/Prompt-Engineering-Guide: Guide and resources for prompt engineering

For text-to-text

- timqian/openprompt.co: Create. Use. Share. ChatGPT prompts
- 60 ChatGPT Prompts for Data Science (Tried, Tested, and Rated): post by Travis Tang from DataDrivenInvestor
- f/awesome-chatgpt-prompts: this repo includes ChatGPT prompt curation to use ChatGPT better
- brexhq/prompt-engineering: "Tips and tricks for working with Large Language Models like OpenAI's GPT-4"

- How to write an effective GPT-3 prompt | Zapier: a list of 6 GPT-3 tips for getting the desired output
- The Art of ChatGPT Prompting: A Guide to Crafting Clear and Effective Prompts: e-book by Fatih Kadir Akın (@fkadev)

For text-to-image

- USP AI Prompt Book: Stable Diffusion v2.1 Prompt Book
- daspartho/prompt-extend: extending stable diffusion prompts with suitable style cues using text generation
- Prompt Box: "organize and save your AI prompts"
- Midjourney artist reference - Google Sheets
- Stable Diffusion Prompt Book — Stability.Ai: prompt book for Stable Diffusion v2.0 and v2.1 released by Stability.AI
- The Ultimate Stable Diffusion Prompt Guide by PromptHero
- CLIP Interrogator - a Hugging Face Space by pharma: image-to-text tool to figure out what a good prompt might be to create new images like an existing one
- [🔥🔥🔥] Prompt book for data lovers II - Google Slides: An open source exploration on text-to-image and data visualization
- some9000/StylePile: A helper script for AUTOMATIC1111/stable-diffusion-webui. Basically a mix and match to quickly get different results without wasting a lot of time writing prompts.
- Artists To Study | All images generated with Google Colab TPUs + CompVis/stable-diffusion-v1-4 + Huggingface Diffusers: a systematic study of artists' styles made by @camenduru
- CLIP retrieval for laion5B: CLIP retrieval using Laion5B. "It works by converting the text query to a CLIP embedding , then using that embedding to query a knn index of clip image embedddings".
- rom1504/clip-retrieval: Easily compute CLIP embeddings and build a CLIP retrieval system with them
- PromptDesign | Reddit: Reddit community for "the art of communicating with natural language models"
- Prompt Engineering and Zero-Shot/Few-Shot Learning [Guide] - inovex GmbH: prompt engineering for text generation
- clip-interrogator.ipynb - Colaboratory: a tool for image-to-prompt
- Useful Prompt Engineering tools and resources | Reddit

- PromptHero: Search the best prompts for Stable Diffusion, DALL-E and Midjourney
- promptoMANIA: AI art community with prompt generator
- Lexica: search over 10M+ Stable Diffusion images and prompts
- list of artists for SD v1.4 A-C / D-I / J-N / O-Z
- succinctly/text2image-prompt-generator · Hugging Face: a GPT-2 model fine-tuned on the succinctly/midjourney-prompts dataset, which contains 250k text prompts that users issued to the Midjourney text-to-image service over a month period
- The Prompter | vicc | Substack: a newsletter about news, tips and thoughts around prompt engineering
- (19) Nikhil Agrawal 📌 on Twitter: 11 AI Images Prompt websites to level up the image quality
- Phraser: a tool that support prompt creation
- PromptBase | Prompt Marketplace: PromptBase is a marketplace for DALL·E, Midjourney & GPT-3 prompts, where people can sell prompts and make money from their prompt crafting skills.
- Professional AI whisperers have launched a marketplace for DALL-E prompts - The Verge
- Visual Prompt Builder: simple deck of illustrated card to combine modifiers for prompt building
- Prompt Engineering Template - Google Sheets: spreadsheet with lists of modifiers for prompt building and a lot of interesting links for reference
- Prompt Engineering: From Words to Art - Saxifrage Blog
- DALL·Ery GALL·Ery Resources: DALL·E 2 and AI art prompt resources & tools to inspire beautiful images
- [2204.13988] A Taxonomy of Prompt Modifiers for Text-To-Image Generation
- List of Aesthetics | Aesthetics Wiki | Fandom
- Artist Directory (Volcano Comparison) | AI Art Creation Wiki | Fandom
- The DALL·E 2 Prompt Book – DALL·Ery GALL·Ery
- DALL·Ery GALL·Ery: A guide to OpenAI's DALL·E – prompts, projects, examples, and tips
- (2) MASSIVE 💥 DALL-E 2 ANIME ⚡ KEYWORDS + MODIFIERS LIST ★ : haaaaven: image prompt modifier collection by haaaaven
- DrawBench: a list of prompts the Google Imagen is organizing as a benchmark

- CLIP Prompt Engineering for Generative Art - matthewmcateer.me: list of styles tested with Quick CLIP Guided Diffusion
- Adobe should make a boring app for prompt engineers (Interconnected)
- [2206.00169] Discovering the Hidden Vocabulary of DALLE-2
- When SD just doesn't understand the prompt no matter how hard I try | Reddit
- It's very interesting how some prompts have very defined output but other specific ones are not | Reddit

Inbox: Stable Diffusion

- Complete guide to samplers in Stable Diffusion - Félix Sanz
- Stable Diffusion Models: list of custom Stable Diffusion models
- Stable Diffusion KLMC2 Animation.ipynb forked: fork by @DigThatData
- Stable Diffusion KLMC2 Animation.ipynb: notebook by @RiversHaveWings to generate animation based on scripted prompts using a technique called KLMC2 discretization of underdamped Langevin dynamics
- DETEXTIFY: A Python library to remove unwanted pseudo-text from images generated by your favorite generative AI models (Stable Diffusion, Midjourney, DALL·E)
- InvokeAI: Stable Diffusion Toolkit and application that runs Windows, Mac and Linux machines, and on GPU cards with as little as 4 GB or RAM
- Stability.ai REST API Documentation: service provided by Stability.ai. DreamStudio authentication required to access this REST API
- [🔥🔥🔥] SD GUIDE FOR ARTISTS AND NON-ARTISTS - Google Docs: a Google Docs with in-depth tips, tricks, tutorials and more related to Stable Diffusion
- [NEWS]Canva Adds a Free and Unlimited AI Text-to-Image Generator | PetaPixel
- prompthero/midjourney-v4-diffusion · Hugging Face: Stable Diffusion fine tuned on Midjourney v4 images, by PromptHero
- CHARL-E: Run Stable Diffusion on your M1 Mac
- The Illustrated Stable Diffusion: explained by Jay Alammar (Visualizing machine learning one concept at a time)
- Img To Music a Hugging Face Space by fffiloni

- [Atlas KREA Stable Diffusion](): An explorable map of KREA AI's Stable Diffusion Search Engine
- [TheLastBen/fast-stable-diffusion](): fast-stable-diffusion, +25-50% speed increase + memory efficient + DreamBooth
- [NovelAI Improvements on Stable Diffusion | by NovelAI | Oct, 2022 | Medium]()
- [ashawkey/stable-dreamfusion](): A pytorch implementation of text-to-3D dreamfusion, powered by stable diffusion.
- [🔥🔥🔥] [JoePenna/Dreambooth-Stable-Diffusion](): Implementation of Dreambooth ([https://arxiv.org/abs/2208.12242]()) with Stable Diffusion (tweaks focused on training faces)
- [🔥🔥🔥] [DreamBooth](): fine tuning text-to-image diffusion models for subject-driven generation
- [🔥] [Arki's Stable Diffusion Guides]()
- [examples/stable-diffusion-finetuning at main · LambdaLabsML/examples](): Fine Tuning Stable Diffusion
- [lkwq007/stablediffusion-infinity](): Outpainting with Stable Diffusion on an infinite canvas
- [🔥🔥🔥] [ML News Stable Diffusion Takes Over! (Open Source AI Art) by Yannic Kilcher - YouTube](): video with examples, updates, and discussion about the impact of Stable Diffusion
- [Diffusion Models in Vision: A Survey | DeepAI](): paper about the diffusion techniques which also discuss the relation with other generative deep learning models
- [ThereforeGames/txt2mask](): Automatically create masks for Stable Diffusion inpainting using natural language
- [basujindal/stable-diffusion](): Optimized Stable Diffusion modified to run on lower GPU VRAM
- [Stable WarpFusion v0.5 (restricted to patreons)](): conditioning video frames with Stable Diffusion by [@devdef]()
- [nateraw/stable-diffusion-videos](): Create videos with Stable Diffusion by exploring the latent space and morphing between text prompts

Stable Diffusion Deployed Web Tools

- [dreamlike.art](): image generator based on Stable Diffusion with fine-tuned models such as Dreamlike Photoreal 2.0. Users receive 1 credit per hour up to 50 credits

- AITWO.CO: a AI-powered design platform with multiple features
- aiimagegenerator.org: free AI art generator that supports Stable Diffusion txt2img and img2img generation, drawing and inpainting
- Playground AI: frontend for Stable Diffusion with 1000 image generations per day
- Astria: tailor-made AI image generation
- drawanyone: generate drawings based on five input images
- DiffusionBee: stable diffusion GUI App
- getimg.ai: Generate photo-realistic images from text using Stable Diffusion
- Enstil: Fast, open, AI-generated images
- Dezgo - Text-to-Image AI generator
- Baseten: Stable Diffusion Demo
- DreamStudio: Frontend for Stable Diffusion API by Stability.ai
- Pollinations - pollinations/stable-diffusion-private
- tencentarc/gfpgan – Run with an API on Replicate
- andreasjansson/stable-diffusion-wip – Run with an API on Replicate
- stability-ai/stable-diffusion – Run with an API on Replicate
- Osmosis.Studio : web-based content-aware collaborative design tool for generating AI ads that sell real products
- Artistic.wtf: stable diffusion GUI App
- Prodia: Stable diffusion-based art generator that does not require signup
- ComicsMaker.ai: Stable diffusion-based comic book generator with support for text2img, img2img, inpainting and controlnet

Web UI for Stable Diffusion via Google Colab

- camenduru/stable-diffusion-webui-colab: collection of stable diffusion webui colab for different checkpoints
- StableDiffusion_WebUI_Simplified.ipynb: versão em português do notebook para rodar a Web UI do Stable Diffusion no Google Colab de graça
- GitHub - AUTOMATIC1111/stable-diffusion-webui: Stable Diffusion web UI: expanded Stable Diffusion web UI
- GitHub - sd-webui/stable-diffusion-webui: Stable Diffusion web UI
- Stable_Diffusion_WebUi_Simplified.ipynb - Colaboratory

References Collection about Stable Diffusion

- [GitHub - awesome-stable-diffusion/awesome-stable-diffusion](): Curated list of resources for the Stable Diffusion AI Model
- [Stable Diffusion General Updates Posted by u/ImeniSottoITreni | Reddit](): a general update on all the "most important" news/repos available
- [List of Stable Diffusion systems | Reddit]()
- [Stable Diffusion Akashic Records | Maks-s/sd-akashic](): A compendium of information regarding Stable Diffusion (SD)
- [1 week of Stable Diffusion | multimodal.art]()
- [Voldy Guide](): detailed beginners guide for Stable Diffusion
- [Dreamer's Guide to Getting Started w/ Stable Diffusion! | Reddit]()
- [A collection of sites using Stable Diffusion (and other handy links) | Reddit]()

Hypertechniques

- [Prompt+](): extended textual conditioning in text-to-image generation [unofficial repo] [arxiv] [page]

ControlNet

- [A Beginner's Guide to Line Detection and Image Transformation with ControlNet]()
- [Scribble Diffusion](): turn your sketch into a refined image using AI (based on ControlNet)

Textual Inversion

- [rinongal/textual_inversion](): repo contains the official code, data and sample inversions of Textual Inversion paper
- [2208.01618 An Image is Worth One Word: Personalizing Text-to-Image Generation using Textual Inversion](): paper that describes the Textual Inversion technique
- [sd-concepts-library (Stable Diffusion concepts library)](): Stable Diffusion Textual Inversion Concepts Library - browse through objects and styles taught by the community to Stable Diffusion and use them in your prompts!

DreamBooth

- **AI Profile Pictures**: paid service for generating profile pictures using AI
- **Training Stable Diffusion with Dreambooth using Diffusers**: experiments to analyze the effect of different settings in Dreambooth
- **fast-DreamBooth.ipynb - Colaboratory**: train custom concepts from input images with this simplified DreamBooth colab
- **(1166) Como Criar Artes Incríveis com o seu Próprio Rosto Usando o Dreambooth! DE FORMA FÁCIL E DE GRAÇA! - YouTube**: tutorial in Portuguese on how to train DreamBooth with your own face

Deforum

- [🔥🔥🔥] **Parseq**: parameter sequencer for Stable Diffusion **[Youtube Tutorials]**
- **deforum-art/sd-webui-deforum**: Deforum extension for AUTOMATIC1111's Stable Diffusion webui **[wiki docs]**
- **Deforum Stable Diffusion Animation - v5 Math Functions - Demo and Test - YouTube**
- **Deforum Stable Diffusion**: generating videos from scripted prompts
- **(5) Deforum notebook v0.5 for Stable Diffusion animations is out! Now with math automation, perspective flips, prompt weights, video masking and waifus! : StableDiffusion**

Creative Uses of Generative AI Tools

- **De-painting historical photographs | Reddit**
- **img2img animation with hands | Reddit**
- **VID 2 VID user script | Reddit**
- **Seamless textures AI generator for Blender by Antonio Freyre | Twitter**
- **"Shattered" by Ronny Khalil | Twitter**: using warp fusion to generate a shattered glass effect
- **Acid Dance by aiplague | Twitter**
- [Fused video by @remi_molettee](https://twitter.com/remi_molettee/status/1568245586494738432)
- **Animation with Dall-e + AE | Reddit**: Patent drawing of an electronic device that …
- **You Describe & AI Photoshops Faces For You [StyleCLIP] - YouTube**

- Experimental Films + Machine Learning Week 7 Part 1 (Aphantasia with OpenAI CLIP) - YouTube
- GitHub - Sanster/lama-cleaner: Image inpainting tool powered by SOTA AI Model
- AgaMiko/pixel_character_generator: Generating retro pixel game characters with Generative Adversarial Networks. Dataset "TinyHero" included.
- Wilco Sierra: A platform that generates engineering challenges for software engineers using GPT.

Courses and Educational Materials

- Google Cloud Skills Boost: Generative AI learning path: curated content on Generative AI "from the fundamentals of Large Language Models to how to create and deploy generative AI solutions on Google Cloud"
- AI for Industrial Design: "students at the National University of Singapore explore AI's capability for design in a semester course and share what they learned. Directed by Donn Koh at the Division of Industrial Design, NUS."
- Let Us Show You How GPT Works — Using Jane Austen - The New York Times
- [🔥🔥🔥] ChatGPT Prompt Engineering for Developers - DeepLearning.AI: short course taught by Isa Fulford (OpenAI) and Andrew Ng (DeepLearning.AI) that provide best practices for prompt engineering
- [🔥🔥🔥] DAIR.AI: Democratizing Artificial Intelligence Research, Education, and Technologies
- Welcome to the 🤗 Deep Reinforcement Learning Course: a Hugging Face Course on Deep Reinforcement Learning
- Crash course in AI art generation by PromptHero: paid ($99) course focused on prompt engineering
- Visual intuition for diffusion models and AI art. #stablediffusionart #aiart #aiartwork #aiartcommunity
- The Illustrated Stable Diffusion by Jay Alammar: "gentle introduction [on] how Stable Diffusion works"
- [🔥]johnowhitaker/tglcourse: The Generative Landscape - a course on generative modelling (currently unfinished)

- [Words are Images | BustBright - Machine Learning Art](#): 7-week Online class starting October 24th, 2022 by [Derrick Schultz](#)
- [Grokking Stable Diffusion.ipynb - Colaboratory - Part 1](#): notebook by [@johnowhitaker](#) exploring Stable Diffusion details
- [Grokking Stable Diffusion: Textual Inversion.ipynb - Colaboratory - Part 2](#): sequel to Grokking Stable Diffusion by [@johnowhitaker](#) that focus on Text Inversion
- [GitHub - johnowhitaker/aiaiart](#): Course content and resources for the AIAIART course
- [Implementation/tutorial of stable diffusion with side-by-side notes by labml.ai | Twitter](#)
- [Practical Deep Learning for Coders 2023 - Part II](#): continuation of the course focusing on the implementation of Stable Diffusion from scratch.
- [Practical Deep Learning for Coders 2022 - Part I](#): "free course designed for people with some coding experience who want to learn how to apply deep learning and machine learning to practical problems" by Jeremy Howard

Papers and References

AI Tools for Research

- [Elicit](#): automate research workflow for literature review
- [Paper Brain](#): summarizer for paper parts. The user needs to copy and paste into their interface.
- [Explainpaper](#): "Upload a paper, highlight confusing text, get an explanation"
- [Paper Player](#): A new way for busy scientists and technologists to consume open science
- [TalkToPapers - namuan/dr-doc-search: Converse with book - Built with GPT-3](#): a github util where AI will do the paper reading for you instead
- [hwaseem04/Research-digest](#): Research paper summariser application for our hackathon

AI Tools for Searching

- [whitead/paper-qa](#): "LLM Chain for answering questions from documents with citations"

- Metaphor: search engine that "understands language — in the form of prompts — so you can say what you're looking for in all the expressive and creative ways"

Papers Collections

- Paper Digest - ChatGPT: Recent Papers on ChatGPT
- dair-ai/ML-Papers-Explained: Explanation to key concepts in ML
- AI Reading List - Google Docs: reading list organized by Jack Soslow (@JackSoslow)
- Aman's AI Journal • Papers List: set of seminal AI/ML papers curated by Aman Chadha
- Casual GAN Papers Reading Club: Community knowledge base for Casual GAN Papers
- Casual GAN Papers: Easy to read summaries of popular AI papers
- The Illustrated VQGAN: illustrated explanation on how VQGAN works
- CLIP: Connecting Text and Images: OpenAI's explanation on how CLIP works
- VQGAN+CLIP — How does it work?. The synthetic imagery ("GAN Art") scene... | by Alexa Steinbrück | Medium
- The Methods Corpus | Papers With Code
- https://ieeexplore.ieee.org/abstract/document/9043519: A State-of-the-Art Review on Image Synthesis With Generative Adversarial Networks
- Utilizando redes adversárias generativas (GANs) como agente de apoio à inspiração para artistas: Trabalho de Graduação de Cláudio Carvalho no Centro de Informática - UFPE
- GAN Lab: Play with Generative Adversarial Networks in Your Browser!
- [PDF] Music2Video: Automatic Generation of Music Video with fusion of audio and text | Semantic Scholar
- [PDF] Active Divergence with Generative Deep Learning - A Survey and Taxonomy | Semantic Scholar
- [PDF] Automating Generative Deep Learning for Artistic Purposes: Challenges and Opportunities | Semantic Scholar

Discussions and Philosophy

- Ethics of Artificial Intelligence: Case Studies and Options for Addressing Ethical Challenges | SpringerLink

- [Embracing change and resetting expectations | Microsoft Unlocked](): text by Terence Tao
- [Art and the science of generative AI | Science]()
- [Where AI evolves from here]()
- [The Age of AI has begun](): notes by Bill Gates
- [GPTs are GPTs: An Early Look at the Labor Market Impact Potential of Large Language Models](): OpenAI's paper that discusses the possible implications of GPTs on the U.S. labor market
- [Why generative AI scares artists but not content writers]()
- [Cultures in AI/AI in Culture](): NeurIPS 2022 Workshop webpage
- [AI Data Laundering - Waxy.org](): How Academic and Nonprofit Researchers Shield Tech Companies from Accountability
- [🔥🔥🔥] [(1232) The End of Art: An Argument Against Image AIs - YouTube](): video essay by Steven Zapata
- [🔥🔥🔥] [The End of Art: An Argument Against Image AIs (Public) - Google Docs](): transcript of the video essay by Steven Zapata
- [🔥🔥🔥] [Generative AI: A Creative New World | Sequoia Capital US/Europe](): report by Sequoia Capital about the possible applications of Generative AI
- [Synthetic Creativity - by Cavin - Deep Markets]()
- [Our Vision for the Future of Synthetic Media | by Victor Riparbelli | Medium]()
- [Deep Else](): A Critical Framework for AI Art
- [How Photography Became An Art Form | Aaron Hertzmann's blog]()
- [Text Is the Universal Interface - Scale]()
- [This artist is dominating AI-generated art. And he's not happy about it. | MIT Technology Review]()
- [The REAL fight over AI art: StableDiffusion | Reddit]()
- [Rutkowski battling AI art overlord | Reddit]()
- [Instead of mining cryptocoins with GPUs, are we now mining art? | Reddit]()
- [Using AI to create art is NOT art! | Reddit : ArtistLounge]()
- [Appreciating the Poetic Misunderstandings of A.I. Art | The New Yorker]()

Critical Views about Generative AI

- [AI Scams, Spam, Hacking, Are Ruining the Internet]()
- [The ChatGPT revolution is another tech fantasy]()

- Why AI Will Save the World | Andreessen Horowitz
- Hollywood studios proposed AI contract that would give them likeness rights 'for the rest of eternity' - The Verge
- The shady world of Brave selling copyrighted data for AI training
- Inside the AI Factory: the humans that make tech seem human - The Verge
- Why transformative artificial intelligence is really, really hard to achieve
- AI and the automation of work — Benedict Evans
- Yuval Noah Harari argues that AI has hacked the operating system of human civilisation
- Generative AI Takes Stereotypes and Bias From Bad to Worse
- Governance of superintelligence by OpenAI
- AIAAIC - AIAAIC Repository: "The independent, open, public interest resource detailing incidents and controversies driven by and relating to artificial intelligence, algorithms, and automation"
- Just Calm Down About GPT-4 Already - IEEE Spectrum
- Pause Giant AI Experiments: An Open Letter - Future of Life Institute
- "OpenAI released plugins for ChatGPT": tweet from @thealexbanks with a list of reflections about the impact of ChatGPT plugins
- Is a socially fair Artificial Intelligence possible? | Uma Inteligência Artificial socialmente justa é possível?: post in Portuguese by H.D. Mabuse
- Noam Chomsky on ChatGPT: It's "Basically High-Tech Plagiarism" and "a Way of Avoiding Learning" | Open Culture
- Despite Their Feats, Large Language Models Still Haven't Contributed to Linguistics | Towards Data Science
- Will ChatGPT Kill the Student Essay? | The Atlantic
- What ChatGPT and generative AI mean for science | Nature
- ChatGPT Is a Bullshit Generator Waging Class War
- Some thoughts about generative AI and the future of education – Mark Carrigan
- Educator Considerations for ChatGPT - OpenAI API
- Stable Diffusion Frivolous · Because lawsuits based on ignorance deserve a response.: a community response for the "Stable Diffusion litigation"
- Stable Diffusion litigation · Joseph Saveri Law Firm & Matthew Butterick

- Generative Language Models and Automated Influence Operations: Emerging Threats and Potential Mitigations | OpenAI
- Abstracts written by ChatGPT fool scientists
- When Machines Change Art | Aaron Hertzmann's blog
- The Dark Risk of Large Language Models | WIRED UK
- ChatGPT, DALL-E 2 and the collapse of the creative process
- What AI-Generated Art Really Means for Human Creativity | WIRED
- Forecasting Potential Misuses of Language Models for Disinformation Campaigns—and How to Reduce Risk
- The Dark Side of AI Art: 4 Potential Issues With the Growing Trend
- Armed With ChatGPT, Cybercriminals Build Malware And Plot Fake Girl Bots
- ChatGPT And The Mass Production Of Office Work - Farsight
- The Danger Of ChatGPT Nobody Talks About | by Jacob Ferus | Dec, 2022 | Medium
- Mind Control in the Metaverse. If we've learned anything about… | by Louis Rosenberg | Predict | Dec, 2022 | Medium
- The Brilliance and Weirdness of ChatGPT - The New York Times
- Como o texto gerado por Inteligência Artificial está envenenando a Internet - MIT Technology Review
- O ChatGPT é o momento "Jurassic Park" da inteligência artificial - NeoFeed
- Por favor, mais racionalidade e menos frenesi em relação ao chatGPT (Parte 1 de 2) | by Cezar Taurion | Dec, 2022 | Medium
- E se estivermos usando uma IA pseudocientífica? - Diogo Cortiz
- As limitações da sensação tecnológica de 2023: o ChatGPT | IAgora? | Época NEGÓCIOS
- 7 Revealing Ways AIs Fail - IEEE Spectrum

Promptism

- promptism | Reddit: Promptism is an art movement whose creators apply machine learning models trained with contrastive language-image pre-training (CLIP) techniques for image generation
- The Promptist Manifesto – deeplearn.art

Image Synthesis

- [Transforming 2D Images into 3D with the AdaMPI AI Model](): guide on how to use the AdaMPI AI model for creating 3D photos from 2D images
- [deep-floyd/IF](): open-source text-to-image model with a high degree of photorealism and language understanding by Stability.AI
- [Word-As-Image for Semantic Typography](): semantically transforming fonts into illustrations
- [Scribble Diffusion](): turn your sketch into a refined image using AI
- [Muse: Text-To-Image Generation via Masked Generative Transformers]()
- [openai/point-e](): OpenAI's point cloud diffusion for 3D model synthesis
- [[arxiv/2211.11319] VectorFusion](): Text-to-SVG by Abstracting Pixel-Based Diffusion Models
- [Parrot Zone](): a database of image synthesis references
- [Image Synth Link List](): a collection of links organized by the collective parrot zone
- [🔥🔥🔥] [Ai generative art tools](): a massive list of shared Google Colab notebooks and tools organized by [@pharampsychotic]()
- [Introduction — PyTTI-Tools]()
- [pyttitools-PYTTI.ipynb - Colaboratory]()
- [pixray/pixray](): Pixray is an image generation system
- [pixray/pixray_notebooks](): pixray demo notebooks
- [dribnet/pixray-text2image – Run with an API on Replicate]()
- [sberbank-ai/ru-dalle](): Generate images from texts. In Russian.
- [Pyttipanna](): visual interface for Pytti by [@_staus](). Pytti is created by [@sportsracer48]()
- [Imagen](): Google's Text-to-Image Diffusion Models
- [Make-A-Scene](): Meta's creative control for AI image generation
- [Stable Diffusion](): Stability.Ai's text-to-image model that is a breakthrough in speed and quality meaning that it can run on consumer GPUs
- [CLIPasso](): Semantically-Aware Object Sketching
- [DreamFusion / Twitter](): Text-to-3D using 2D Diffusion paper
- [apple/ml-no-token-left-behind](): PyTorch Implementation of No Token Left Behind: Explainability-Aided Image Classification and Generation
- [disco-diffusion/Local_Disco_Diffusion_v4_1.ipynb at main · Midgraph/disco-diffusion]()

- Audio to keyframe string: this tool is used to generate strings for the keyframes of AI animation notebooks, such as this VQGAN+CLIP Animations notebook, using the volume of audio tracks.
- [🔥] S2ML Image Generator: evolution of the first VQGAN+CLIP Google Colab notebook by Katherine Crownson maintained by Justin Bennington
- [🔥] Create Variations on Images With Looking Glass 1.1 (ru-DALLE) - YouTube | Artificial Images
- [🔥] Looking Glass 1.1 (ru-DALLE): Making ruDALL-E fine tuning quick and painless. Copyright (C) 2021 Bearsharktopus Studios
- NÜWA: Visual Synthesis Pre-training for Neural visUal World creAtion (ML Research Paper Explained) - YouTube | Yannic Kilcher
- [🔥] yuval-alaluf/hyperstyle: Official Implementation for "HyperStyle: StyleGAN Inversion with HyperNetworks for Real Image Editing" https://arxiv.org/abs/2111.15666
- [🔥] Vadim Epstein's Aphantasia library: CLIP + FFT/DWT/RGB = text to image/video
- mikaelalafriz/lucid-sonic-dreams: syncs GAN-generated visuals to music
- Greg Surma - Portfolio
- crowsonkb (Katherine Crowson): who wrote the tutorial of VQGAN+CLIP
- DALL·E: Creating Images from Text
- DALL-E mini: DALL·E mini is an AI model that generates images from any prompt you give!
- DALL-E mini GitHub
- DALL-E mini Project Report
- CLIPIT PixelDraw - Colaboratory
- CLIP Guided Diffusion HQ 512x512.ipynb - Colaboratory
- Smooth Transitioning Between Position / Rotation / Zoom and Text Inputs by Keyframing Parameters: A Proof of Concept [15,000 Frames] : deepdream
- neural-dream Alternatives and Similar Photos & Graphics Apps | AlternativeTo
- CoG 21: Adversarial Reinforcement Learning for Procedural Content Generation
- GitHub Repositories of Hugging Face

DALL-E 2

- [lucidrains/DALLE2-pytorch](): Implementation of DALL-E 2, OpenAI's updated text-to-image synthesis neural network, in Pytorch
- [DALL-E 2's Failures Are the Most Interesting Thing About It - IEEE Spectrum](): paper by Eliza Strickland
- [DALL·E 2](): OpenAI system, evolution of the DALL-E launched in Jan 2021, that can create realistic images and art from a description in natural language.

Latent Diffusion

- [LatentVision_rynmurdock.ipynb - Colaboratory]()
- [Latent_Diffusion_with_LAION_400M.ipynb - Colaboratory]()

GLIDE

- ["GLIDE: Towards Photorealistic Image Generation and Editing with Text-Guided Diffusion Models", Nichol et al 2021 (OpenAI's DALL-E successor: 5b-parameter diffusion models + noise-aware CLIP) : MediaSynthesis]()
- [OpenAI paper: "GLIDE: Towards Photorealistic Image Generation and Editing with Text-Guided Diffusion Models". Code and a smaller filtered model (300 million parameters vs 3.5 billion parameters in the paper) are available. : bigsleep]()

VQGAN+CLIP

- [VQ-GAN | Paper Explanation - YouTube](): explanation video about VQGAN with didactic visualizations
- [VQGAN+CLIP — How does it work?. The synthetic imagery ("GAN Art") scene… | by Alexa Steinbrück | Aug, 2021 | Medium]()
- [Introduction to VQGAN+CLIP - Sourceful]()
- [How to use VQGAN+CLIP to generate images from a text prompt—tutorial for beginners | NightCafe Creator]()
- [VQGAN + CLIP Keyword Modifier Comparison - NightCafe Creator]()
- [~200 CLIP+VQGAN keywords tested on 4 subjects : bigsleep]()
- [AI Generated Art Scene Explodes as Hackers Create Groundbreaking New Tools CLIP+VQ-GAN | VICE]()

- VQGAN+CLIP (with pooling): Generate images from text prompts with VQGAN and CLIP (z+quantize method)
- ~200 CLIP+VQGAN keywords on 4 subjects, by @kingdomakrillic - Imgur
- Experimentando o VQGAN+CLIP: gerador de imagens a partir de textos - YouTube Filipe Calegario

Text-to-image Google Colab Notebooks (Multiple Models)

- VQGAN + CLIP + Gumbel
- OpenAI DVAE+CLIP
- Text2Image VQGAN
- Improved Multi Perceptor VQGAN + CLIP
- Latent Majesty Diffusion v1.3
- CLIP Guided Decision Transformer
- CLIP Guided Diffusion
- GLIDE
- PixelDirect
- CLIP Guided Diffusion Secondary Model Method
- Zoetrope
- Quick CLIP Guided Diffusion
- MSE Regulized VQGAN+CLIP
- CLIPRGB ImStack
- CLIP Guided Diffusion v4
- Simplified Google Colab Interface for the above models: series of interface simplification made by EAR+CIn Research project

Generative Adversarial Networks (GANs)

- [🔥🔥🔥] Drag Your GAN: "Interactive Point-based Manipulation on the Generative Image Manifold"
- [🔥] weihaox/awesome-gan-inversion: A collection of resources on GAN inversion
- DeCoDe Lab: CREATIVEGAN - Editing Generative Adversarial Networks for Creative Design Synthesis
- Latent Space Exploration with StyleGAN2
- yuval-alaluf/stylegan3-editing: Official Implementation of "Third Time's the Charm? Image and Video Editing with StyleGAN3" https://arxiv.org/abs/2201.13433

- autonomousvision/projected_gan: [NeurIPS'21] Projected GANs Converge Faster
- These Bored Apes Do Not Exist: GAN to NFT Pipeline | Medium
- ouhenio/StyleGAN3-CLIP-notebooks: A collection of Jupyter notebooks to play with NVIDIA's StyleGAN3 and OpenAI's CLIP for a text-based guided image generation.
- k-l-lambda/stylegan-web: A web porting for NVlabs' StyleGAN.
- aakashjhawar/AvatarGAN: Generate Cartoon Images using Generative Adversarial Network
- [🔥] dvschultz/stylegan3: Forked by Schultz from Stylegan3
- Alias-Free Generative Adversarial Networks (StyleGAN3): NVidia official StyleGAN3 release page
- [🚀] StyleGAN-NADA: CLIP-Guided Domain Adaptation of Image Generators
- Let's Talk Energy Usage of Generative Machine Learning
- StyleGAN: Use machine learning to generate and customize realistic images | by Jamshed Khan | Heartbeat
- Audio-reactive Latent Interpolations with StyleGAN
- SofGAN: A GAN Face Generator That Offers Greater Control - Unite.AI
- Real GANs in AI | Hacker Noon: deep dive into what the generative models are, the recent developments in the field, and the usage of GANs in business
- GANshare | Towards Data Science: Creating and Curating Art with AI

Collections

- The Generative AI Landscape: "a collection of awesome generative AI applications"
- The ultimate list of AI tools for creators | Descript: collection organized by Descript
- AI art resources | Unlimited Dream Co.: collection of AI art software, guides, inspiration, tools and other useful resources.
- AI Library: catalog of AI tools and neural networks for creators
- [🔥🔥] Pollinations.AI: a frontend hosting a set of curated notebooks that allow creating and experimenting with generative art. Their objective is to facilitate the creation and translation of multiple forms of human expressions.

- [🔥] hive/notebooks at main · pollinations/hive: collection of notebooks used by Pollinations.AI
- Post Reddit - MachineLearning: List of sites/programs/projects that use OpenAI's CLIP neural network for steering image/video creation to match a text description
- Top 41 AI Art Generators: Make AI Art, Paintings & More (2021 GUIDE) — AIArtists.org
- 10 Best AI Art Generators (2022) - Unite.AI
- Get started with making AI art in 2022 – deeplearn.art
- Text-to-Image Summary – Part 1 | Softology's Blog
- [🔥🔥] Hitchhiker's Guide To The Latent Space: Community Notebook Document: great collection of interesting notebooks
- Machine learning for arts
- [🔥] dvschultz/ml-art-colabs: A list of Machine Learning Art Colabs

Image Upscaling

- Remini - AI Photo Enhancer: photo and video enhancer
- AI Image Upscaler - Enlarge & Enhance Your Photos for Free - Upscale.media: simple free alternative for image upscaling
- Topaz Labs: AI Image Quality Software: "professional grade workflow, with many features" (this is an affiliate link by nejcsusec.beehiiv.com).
- AI Image Upscaler - Upscale Photo, Cartoons in Batch Free: "free, browser-based, with five credits per day" reference by nejcsusec.beehiiv.com
- Why you should upscale your images: comparing different tools
- Model Database - Upscale Wiki: list of models for upscaling images
- Gigapixel AI: paid AI image upscaler delivering enhanced detail and resolution
- Image Super-Resolution
- Upscale to huge sizes and add detail with SD Upscale : StableDiffusion: tutorial on Reddit

Image Restoration

- sczhou/codeformer: face restoration algorithm for old photos and AI-generated faces

- **TencentARC/GFPGAN**: GFPGAN aims at developing Practical Algorithms for Real-world Face Restoration

Image Segmentation

- **Segment Anything | Meta AI**: "a new AI model from Meta AI that can "cut out" any object, in any image, with a single click"

Multimodal Embedding Space

- **facebookresearch/ImageBind**: ImageBind One Embedding Space to Bind Them All

Online Tools and Applications

- **ZZZ Code AI**: AI-powered free website to get any programming question answered or code generated.
- **Scribble Diffusion**: turn your sketch into a refined image using AI
- **Paint by Text**: Edit your photos using written instructions, with the help of an AI.
- **Scenario AI**: AI-generated game assets
- **AnimalAI**: custom AI-generated animal portraits (profits are directed to various wildlife conservation organizations)
- **starryai**: AI Art Generator App - AI Art Maker
- **ProsePainter**: an interactive tool to "paint with words." It incorporates guidable text-to-image generation into a traditional digital painting interface
- **ProsePainter: Image + Sketching Interface + CLIP! - YouTube**
- **Cocreator AI**: creative computer agent (in wait list)
- **Runway ML**: AI video creation suite
- **Hotpot.ai - Hotpot.ai**: set of AI Tools to post-process images
- **Toonify yourself by Justin Pinkney**: turn a human face into a cartoon
- **deepart.io**: a online tool for applying style transfer
- **Artbreeder**: web-based tool to generate images by breeding existing images
- **Ostagram.ru**: image style transfer plataform
- **cleanup.pictures**: remove objects, people, text and defects from any picture for free

- remove.bg: remove background from images
- Quick, Draw!: can a neural network learn to recognize doodling? A game to help NL by adding users drawing
- ChatGenius: a software company that provides AI chatbot solution powered by GPT-4 and ChatGPT with support in over 110 languages and can be integrated seamlessly into your website or platform.
- Nekton.ai: automate your workflows with AI

Datasets

- Have I Been Trained?: tool for searching 5.8 billion images used to train popular AI art models
- laion-aesthetic-6pls: exploring 12 million of the 2.3 billion images used to train Stable Diffusion's image generator
- CLIP retrieval for laion5B: CLIP retrieval using Laion5B. "It works by converting the text query to a CLIP embedding , then using that embedding to query a knn index of clip image embedddings".
- rom1504/clip-retrieval: Easily compute CLIP embeddings and build a CLIP retrieval system with them
- LAION: Large-scale Artificial Intelligence Open Network

Inbox: Music and Audio projects

- Ultimate Vocal Remover: vocal removal using AI
- Introducing Voicebox: The first generative AI model for speech to generalize across tasks with state-of-the-art performance
- MusicGen: Meta's tool for generating music
- facebookresearch/audiocraft: a library for audio processing and generation with deep learning.
- AudioGPT | arxiv: Understanding and Generating Speech, Music, Sound, and Talking Head [code] [demo]
- AudioLDM: Text-to-Audio Generation with Latent Diffusion Models - Speech Research
- lucidrains/musiclm-pytorch: Implementation of MusicLM, Google's new SOTA model for music generation using attention networks, in Pytorch
- [🔥🔥🔥] archinetai/audio-ai-timeline: A timeline of the latest AI models for audio generation, starting in 2023

- **MusicLM**: generating music from text
- [🔥🔥🔥] **Riffusion**: an app for real-time music generation with stable diffusion
- **Harmonai's Dance Diffusion**: Open-Source AI Audio Generation Tool For Music Producers – Weights & Biases
- **Dance Diffusion**: the Hugging Face Space by harmonai
- **MubertAI/Mubert-Text-to-Music**: a simple notebook demonstrating prompt-based music generation via Mubert API
- **DDSP-VST**: Neural Audio Synthesis for All
- **LOVO AI**: AI Voiceover & Text to Speech Platform with human-like voices
- **AIVA**: The AI composing emotional soundtrack music
- **Jukebox**: "a neural net that generates music, including rudimentary singing, as raw audio in a variety of genres and artist styles"
- **Magenta**: Music and Art Generation with Machine Intelligence
- **magenta/magenta**: Magenta's official GitHub repository
- **AI Image to sound [Melobytes.com]**
- **archinetai/audio-diffusion-pytorch**: Audio generation using diffusion models, in PyTorch

Inbox: Speech-to-text (STT) and spoken content analysis

- **LeMUR**: a single API, enabling developers to reason over their spoken data with a few lines of code

Inbox: Text-to-speech (TTS) and avatars

- **Voice-Swap**: transform vocals to match the style of a list of singers
- **Shaunwei/RealChar**: AI Character/Companion in Realtime
- **UneeQ Digital Humans**: 3D character lib synced
- **AI Voice Generator**: free online AI-powered text-to-speech generator that creates voice overs with natural, realistic voices
- **KangweiiLiu/Awesome_Audio-driven_Talking-Face-Generation**: A curated list of resources of audio-driven talking face generation
- **Play.ht**: "AI voice generator and realistic text to speech online"
- **Murf AI | AI Voice Generator**: versatile text to tpeech software
- **VALL-E**: synthesize high-quality personalized speech with only a 3-second samples

- [🔥] Eleven Labs Beta: a TTS service that adds emotion to the generated voice
- neonbjb/tortoise-tts: "A multi-voice TTS system trained with an emphasis on quality"
- Studio D-ID: create video with still images synced with text-to-speech tool [#avatar]
- Synthesia: AI Video Generation Platform [#avatar]
- Speech Studio - Microsoft Azure: Microsoft's cloud cognitive services

Inbox: Video AI tools

- Ssemble: collaborative video editor with a collection of AI plugins
- Transforming 2D Images into 3D with the AdaMPI AI Model: guide on how to use the AdaMPI AI model for creating 3D photos from 2D images
- Nathan Lands on Twitter: "AI video has started to produce mindblowing results and could eventually disrupt Hollywood / Twitter: Twitter thread with examples of Generative AI tools for video
- Stable Animation SDK: a text-to-animation tool for developers by Stability AI [dev platform]
- Twelve Labs: multimodal, contextual understanding for video search
- Align your Latents: high-resolution video synthesis with latent diffusion models [arxiv]
- Gen-2 by Runway: "a multi-modal AI system that can generate novel videos with text, images, or video clips" [arxiv]
- CiaraRowles/TemporalNet · Hugging Face: a ControlNet model designed to enhance the temporal consistency of generated outputs [tweet]
- Video-P2P UI - a Hugging Face Space by video-p2p-library: video editing with cross-attention control [tweet]
- Text2Video-Zero - a Hugging Face Space by PAIR: zero-shot text-to-video synthesis diffusion framework [tweet] [arxiv]
- ModelScope - a Hugging Face Space by damo-vilab: text-to-video synthesis [page]
- neural frames: tools for animation creation inspired on deforum
- [🔥] dmarx/video-killed-the-radio-star: Notebook and tools for end-to-end automation of music video production with generative AI

- [🔥🔥🔥] Phenaki – Google Research: realistic video generation from open-domain textual descriptions
- THUDM/CogVideo: text-to-video generation
- baowenbo/DAIN: Depth-Aware Video Frame Interpolation (CVPR 2019)
- Dain-App 1.0 [Nvidia Only] by GRisk: Depth-Aware Video Frame Interpolation (CVPR 2019)

Inbox: Games and AI

- The Generative AI Revolution in Games | Andreessen Horowitz: this article presents a list of use cases of generative AI in games
- AI for Game Development: Creating a Farming Game in 5 Days. Part 1

Inbox: DEV + AI

- geekan/MetaGPT: the multi-agent framework that, give one line requirement, return PRD, design, tasks, repo
- ZZZ Code AI: AI-powered free website to get any programming question answered or code generated.
- Rapidpages: create React & Tailwind landing pages using AI
- Teaching Programming in the Age of ChatGPT – O'Reilly
- GPT Web App Generator: generates a webapp from a title, description, and other simple parameters
- wolfia-app/gpt-code-search: search a codebase with natural language using AI
- Dedicated File for Inbox for GenAI + Dev: a list for further analysis and organization of GenAI + dev references
- e2b-dev/e2b: "Open-source platform for building AI-powered virtual software developers"
- Metabob: Generative AI to improve and automate code reviews
- gventuri/pandas-ai: Pandas AI is a Python library that integrates LLMs capabilities into Pandas, making dataframes conversational
- A Systematic Evaluation of Large Language Models of Code: arxiv paper
- pgosar/ChatGDB: "Harness the power of ChatGPT inside the GDB debugger"
- The Impact of AI on Developer Productivity: Evidence from GitHub Copilot | arxiv

- openai/openai-cookbook: Examples and guides for using the OpenAI API
- Reduce costs when prompting using GPT

People and works

Interesting Instagram Accounts, Posts and Reels

- science on Instagram: "Human evolution generated by AI Stable Diffusion"
- Deep Music Visualizer
- Lucid Sonic Dreams (@lucidsonicdreams)

Interesting Youtube Channels

- Artificial Images: Demos and explanations to make art using machine learning
- Glenn Marshall Neural Art
- How to Generate Art - Intro to Deep Learning #8

Interesting GitHub Repositories

- dvschultz: Derrick Schultz's GitHub
- dvschultz/ml-art-colabs: collection of Google Colab Notebooks for ML Arts

Artists and Artworks

- Ai Generated Music Video - Deltron 3030 - Virus - YouTube
- Artificial Realities: Coral / Twitter: artwork by @refikanadol commissioned by World Economic Forum
- [🔥] Creep - YouTube by Glenn Marshall Neural Art: how did they translated the images using VQGAN+CLIP? How did they seamlessly wander on the latent space?
- 35 Artists Using AI With Under 1000 Followers That You Need To Follow Today / Twitter
- Computer Vision Art Gallery : CVPR 2021: artworks dealing with computer vision technologies
- Confluence: a generative art project by Devi Parikh on BrainDrops.

- Learning to See – Memo Akten | Mehmet Selim Akten | The Mega Super Awesome Visuals Company
- Alien Dreams: An Emerging Art Scene - ML@B Blog
- Neural Zoo | Sofia Crespo
- KRЯRL DЯAWINGS: Runway ML -- 3rd "Model" (based on long poses)
- Frea Buckler ~ Artist: obras usadas para criar essa rede (19) derrick has started yet another project on Twitter: "Just sent @buntworthy a demo StyleGAN model I trained / Twitter
- (Non-)Human
- Authentic Digital Art - Unknown Departure | SuperRare
- A Selection of Machine Learning Art Inspiration
- Top 25 AI Artists of 2021 (Photos, Profiles & History of AI Art)- AIArtists.org: AIArtists.org showcases leading artists using Artificial Intelligence, tools to make AI Art, and a timeline of AI Art History.
- Helena Sarin – Artist Profile (Photos, Videos, Exhibitions) — AIArtists.org
- Images Generated By AI Machines (@images_ai) / Twitter
- https://www.instagram.com/refikanadol/
- The Steampunk Circus Human Machine Collaboration - Video, Sound and Stories with AI / YouTube

Galleries

- AICAN
- Ganvas Studio - Neural Network Paintings
- Syn Feather Sweater / STRELITZIA – HATRA E STORE

Related Awesome Lists

- kyrolabs/awesome-langchain: 😎 Awesome list of tools and project with the awesome LangChain framework
- KangweiiLiu/Awesome_Audio-driven_Talking-Face-Generation: A curated list of resources of audio-driven talking face generation
- [🔥] amrzv/awesome-colab-notebooks: Collection of google colaboratory notebooks for fast and easy experiments
- [🔥🔥🔥] steven2358/awesome-generative-ai: A curated list of modern Generative Artificial Intelligence projects and services
- [🔥🔥🔥] jonathandinu/awesome-ai-art: "A list of AI Art courses, tools, libraries, people, and places"

- margaretmz/awesome-ai-art-design: An awesome list: AI for art and design.
- toxtli/awesome-machine-learning-jupyter-notebooks-for-colab: A curated list of Machine Learning and Deep Learning tutorials in Jupyter Notebook format ready to run in Google Colaboratory
- chaosreactor/awesome-generative-ai: An awesome list of low- and no-code generative AI resources
- [🔥] altryne/awesome-ai-art-image-synthesis: A list of awesome tools, ideas, prompt engineering tools, colabs, models, and helpers for the prompt designer playing with aiArt and image synthesis. Covers Dalle2, MidJourney, StableDiffusion, and open source tools.
- justinpinkney/awesome-pretrained-stylegan2: A collection of pre-trained StyleGAN 2 models to download

Miscellaneous

Bio experiments

- fMRI-to-image: tweet by danberridge "The 'presented images' were shown to a group of humans. The 'reconstructed images' were the result of an fMRI output to Stable Diffusion. In other words, Stable Diffusion literally read people's minds."

Jobs in Generative AI

- Jobs and talents in AI/ML, Data Science and Big Data | ai-jobs.net

Improving Google Colab experience

- 7 ways to load external data into Google Colab | by B. Chen | Towards Data Science
- 10 tricks for a better Google Colab experience | by Cyprien NIELLY | Towards Data Science
- Quickly share ML WebApps from Google Colab using ngrok for Free | by AbdulMajedRaja RS | Towards Data Science
- Jupyter Widgets for Interactivity in Google Colab: notebook with examples of using Jupyter Widgets in Colab, allowing interactive inputs
- Jupyter Widgets official documentation

Auxiliary tools and concepts

- chaiNNer-org/chaiNNer: A node-based image processing and AI upscaling GUI that makes it easy to chain together complex processing tasks
- BIRME: Bulk Image Resizing Made Easy 2.0 (Online & Free)
- The Art of PNG Glitch
- HashLips/hashlips_art_engine: tool used to create multiple different instances of artworks based on provided layers

Credit: https://github.com/filipecalegario/awesome-generative-ai

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Session Structure →

1. Topic Understanding
2. Real-world examples
3. Implementation in Python
4. Interview questions on that topic
5. Questions to implement in programming
6. Reading one blog or reacting on the resource in the machine learning space
7. Study one company hiring in Machine Learning at a time, and analyze their products and services.
8. Discussion on How to be better?

About me (Your Mentor)

I am **Himanshu Ramchandani** a Data & Engineering Consultant. I help enterprises utilize big data to build AI-powered products & Mentor professionals to improve their skills in the data field by 1% every day.

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