

Research Lists

A compilation of projects, papers, blogs in autonomous agents.

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Projects

Developer tools

- [2023/8/10] [ModelScope-Agent](<https://github.com/modelscope/modelscope-agent>) - An Agent Framework Connecting Models in ModelScope with the World
- [2023/05/25] [Gorilla](<https://github.com/ShishirPatil/gorilla>) - An API store for LLMs
- [2023/03/31] [BMTools](<https://github.com/OpenBMB/BMTools>) - Tool Learning for Big Models, Open-Source Solutions of ChatGPT-Plugins
- [2023/03/09] [LMQL](<https://github.com/eth-sri/lmql>) - A query language for programming (large) language models.
- [2022/10/25] [Langchain](<https://github.com/hwchase17/langchain>) - Building applications with LLMs through composability

Applications

- [2023/07/08] [ShortGPT](<https://github.com/RayVentura/ShortGPT>) - ShortGPT - An experimental

AI framework for automated short/video content creation. Enables creators to rapidly produce, manage, and deliver content using AI and automation.

- [2023/07/05] [gpt-researcher](https://github.com/assafelovic/gpt-researcher) - GPT based autonomous agent that does online comprehensive research on any given topic
- [2023/07/04] [DemoGPT](https://github.com/melih-unsal/DemoGPT) - DemoGPT enables you to create quick demos by just using prompts. [[demo]](demogpt.io)
- [2023/06/30] [MetaGPT](https://github.com/geekan/MetaGPT) - The Multi-Agent Framework: Given one line Requirement, return PRD, Design, Tasks, Repo
- [2023/06/11] [gpt-engineer](https://github.com/AntonOsika/gpt-engineer) - Specify what you want it to build, the AI asks for clarification, and then builds it.
- [2023/05/16] [SuperAGI](https://github.com/TransformerOptimus/SuperAGI) - <> SuperAGI - A dev-first open source autonomous AI agent framework. Enabling developers to build, manage & run useful autonomous agents quickly and reliably.
- [2023/05/13] [Developer](https://github.com/smol-ai/developer) - Human-centric & Coherent Whole Program Synthesis aka your own personal junior developer
- [2023/04/07] [AgentGPT](https://github.com/reworkd/AgentGPT) - Assemble, configure, and deploy autonomous AI Agents in your browser. [[demo]](agentgpt.reworkd.ai)
- [2023/04/03] [BabyAGI](https://github.com/yoheinakajima/babyagi) - an example of an AI-powered task management system
- [2023/03/30] [AutoGPT](https://github.com/Significant-Gravitas/Auto-GPT) - An experimental open-source attempt to make GPT-4 fully autonomous.

Benchmarks

- [2023/08/07] [AgentBench](https://github.com/THUDM/AgentBench) - A Comprehensive Benchmark to Evaluate LLMs as Agents. [paper](https://arxiv.org/abs/2308.03688)

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[2023/06/18]

[Auto-GPT-Benchmarks](https://github.com/Significant-Gravitas/Auto-GPT-Benchmarks) - A repo built for the purpose of benchmarking the performance of agents, regardless of how they are set up and how they work.

- [2023/05/28] [ToolBench](https://github.com/OpenBMB/ToolBench) - An open platform for training, serving, and evaluating large language model for tool learning.

Articles

Research Papers

- [2023/08/11] [BOLAA: Benchmarking and Orchestrating LLM-Augmented Autonomous Agents](https://arxiv.org/pdf/2308.05960v1.pdf), Zhiwei Liu, et al.

- [2023/07/31] [ToolLLM: Facilitating Large Language Models to Master 16000+ Real-world APIs](https://arxiv.org/abs/2307.16789), Yujia Qin, et al.

- [2023/07/16] [Communicative Agents for Software Development](https://arxiv.org/abs/2307.07924), Chen Qian, et al.

- [2023/06/09] [Mind2Web: Towards a Generalist Agent for the Web](https://arxiv.org/pdf/2306.06070.pdf), Xiang Deng, et al.

[[code]](https://github.com/OSU-NLP-Group/Mind2Web)

[[demo]](https://osu-nlp-group.github.io/Mind2Web/)

- [2023/06/05] [Orca: Progressive Learning from Complex Explanation Traces of GPT-4](https://arxiv.org/pdf/2306.02707.pdf), Subhabrata Mukherjee et al.

- [2023/05/25] [Voyager: An Open-Ended Embodied Agent with Large Language Models](https://arxiv.org/pdf/2305.16291.pdf), Guanzhi Wang, et al.

[[code]](https://github.com/MineDojo/Voyager) [[website]](https://voyager.minedojo.org/)

- [2023/05/23] [ReWOO: Decoupling Reasoning from Observations for Efficient Augmented Language Models](https://arxiv.org/pdf/2305.18323.pdf), Binfeng Xu, et al.

[[code]](https://github.com/billxbf/ReWOO)

- [2023/05/17] [Tree of Thoughts: Deliberate Problem Solving with Large Language Models](<https://arxiv.org/abs/2305.10601>), Shunyu Yao, et al. `(https://github.com/kyegomez/tree-of-thoughts)` `(https://github.com/ysymyth/tree-of-thought-llm)`
- [2023/05/12] [MEGABYTE: Predicting Million-byte Sequences with Multiscale Transformers](<https://arxiv.org/abs/2305.07185>), Lili Yu, et al.
- [2023/05/19] [FrugalGPT: How to Use Large Language Models While Reducing Cost and Improving Performance](<https://arxiv.org/abs/2305.05176>), Lingjiao Chen, et al.
- [2023/05/06] [Plan-and-Solve Prompting: Improving Zero-Shot Chain-of-Thought Reasoning by Large Language Models](<https://arxiv.org/abs/2305.04091>), Lei Wang, et al.
- [2023/05/01] [Learning to Reason and Memorize with Self-Notes](<https://arxiv.org/abs/2305.00833>), Jack Lanchantin, et al.
- [2023/04/24] [WizardLM: Empowering Large Language Models to Follow Complex Instructions](<https://arxiv.org/abs/2304.12244>), Can Xu, et al.
- [2023/04/22] [LLM+P: Empowering Large Language Models with Optimal Planning Proficiency](<https://arxiv.org/abs/2304.11477>), Bo Liu, et al.
- [2023/04/07] [Generative Agents: Interactive Simulacra of Human Behavior](<https://arxiv.org/abs/2304.03442>), Joon Sung Park, et al. `(https://github.com/mkturkcan/generative-agents)`
- [2023/03/30] [Self-Refine: Iterative Refinement with Self-Feedback](<https://arxiv.org/abs/2303.17651>), Aman Madaan, et al. `(https://github.com/madaan/self-refine)`
- [2023/03/30] [HuggingGPT: Solving AI Tasks with ChatGPT and its Friends in HuggingFace](<https://arxiv.org/pdf/2303.17580.pdf>), Yongliang Shen, et al. `(https://github.com/microsoft/JARVIS)` `(https://huggingface.co/spaces/microsoft/HuggingGPT)`

- [2023/03/20] [Reflexion: Language Agents with Verbal Reinforcement Learning](<https://arxiv.org/pdf/2303.11366.pdf>), Noah Shinn, et al.
[[code]](<https://github.com/noahshinn024/reflexion>)
- [2023/03/04] [Towards A Unified Agent with Foundation Models](https://openreview.net/pdf?id=JK_B1tB6p-), Norman Di Palo et al.
- [2023/02/23] [Not what you've signed up for: Compromising Real-World LLM-Integrated Applications with Indirect Prompt Injection](<https://arxiv.org/abs/2302.12173>), Sahar Abdelnab, et al.
- [2023/02/09] [Toolformer: Language Models Can Teach Themselves to Use Tools](<https://arxiv.org/pdf/2302.04761.pdf>), Timo Schick, et al.
[[code]](<https://github.com/lucidrains/toolformer-pytorch>)
- [2022/12/12] [LMQL: Prompting Is Programming: A Query Language for Large Language Models](<https://arxiv.org/abs/2212.06094>), Luca Beurer-Kellner, et al.
- [2022/10/06] [ReAct: Synergizing Reasoning and Acting in Language Models](<https://arxiv.org/pdf/2210.03629.pdf>), Shunyu Yao, et al.
[[code]](<https://github.com/ysymyth/ReAct>)
- [2022/07/20] [Inner Monologue: Embodied Reasoning through Planning with Language Models](<https://arxiv.org/pdf/2207.05608.pdf>), Wenlong Huang, et al.
[[demo]](<https://innermonologue.github.io/>)
- [2022/04/04] [Do As I Can, Not As I Say: Grounding Language in Robotic Affordances](), Michael Ahn, e al.
[[demo]](<https://say-can.github.io/>)
- [2021/12/17] [WebGPT: Browser-assisted question-answering with human feedback](<https://arxiv.org/pdf/2112.09332.pdf>), Reiichiro Nakano, et al.
- [2021/06/17] [LoRA: Low-Rank Adaptation of Large Language Models](<https://arxiv.org/abs/2106.09685>), Edward J. Hu, et al.

Blog Articles

- [2023/08/14] [A Roadmap of AI Agents(Chinese)](<https://zhuanlan.zhihu.com/p/649916692>) By Haojie Pan
- [2023/06/23] [LLM Powered Autonomous Agents](<https://lilianweng.github.io/posts/2023-06-23-agent/>) By Lilian Weng
- [2023/06/11] [A CRITICAL LOOK AT AI-GENERATED SOFTWARE](<https://spectrum.ieee.org/ai-software>) By JAIDEEP VAIDYAHAFIZ ASIF
- [2023/04/29] [AUTO-GPT: UNLEASHING THE POWER OF AUTONOMOUS AI AGENTS](<https://www.leewayhertz.com/autogpt/>) By Akash Takyar
- [2023/04/20] [Conscious Machines: Experiments, Theory, and Implementations(Chinese)](<https://pattern.swarma.org/article/230>) By Jiang Zhang
- [2023/04/18] [Autonomous Agents & Agent Simulations](<https://blog.langchain.dev/agents-round/>) By Langchain
- [2023/04/16] [4 Autonomous AI Agents you need to know](<https://towardsdatascience.com/4-autonomous-ai-agents-you-need-to-know-d612a643fa92>) By Sophia Yang
- [2023/03/31] [ChatGPT that learns to use tools(Chinese)](<https://zhuanlan.zhihu.com/p/618448188>) By Haojie Pan

Talks

- [2023/06/05] [Two Paths to Intelligence](<https://www.youtube.com/watch?v=rGgGOccMEiY&t=1497s>) by Geoffrey Hinton
- [2023/05/24] [State of GPT](<https://www.youtube.com/watch?v=bZQun8Y4L2A>) by Andrej Karpathy | OpenAI