Govind Pimpale

(408) 508-1229 | gpimpale29@gmail.com | github.com/pimpale | pimpale.github.io | linkedin.com/in/govind-pimpale

EDUCATION

University of California, Los Angeles   Exp. March 2025 | GPA: 3.860
Major: B.S. Computer Science and Engineering
Coursework: Data Structures, Programming Languages, Operating Systems, Distributed Systems, Computer Network Fundamentals, Compiler Construction, Machine Learning, Linear Algebra, Statistics

TECHNICAL SKILLS

Languages: Python, C++, Rust, Java, Javascript, Typescript, SQL, CUDA
Web Technologies: ReactJS, PostgreSQL, MySQL, SQL Server, Spring Boot, Dropwizard, Nginx, Express.js, Flask, OpenAI API, Discord API WebGL, Three.js, OpenGL, Vulkan, GLSL, Unity, Pytorch, Tensorflow, Keras, OpenCV
Developer Tools: Git, VS Code, AWS, PyCharm, Jupyter Notebook, Docker, Linux

EXPERIENCE

MATS | matsprogram.org   June 2024 – Present
Research Scholar   *Berkeley, CA*
- Researched LLM agent scaling laws and developed forecasting methods for predicting downstream capabilities of autonomous language model agents.
- Ran different models scaffolded as LM agents on various agent benchmarks (GAIA, METR, etc.) and investigated how the underlying model's capabilities and scaffolding influenced performance. Used Python, Typescript, and Docker

Lacework | lacework.com   June 2023 – September 2023
Software Engineering Intern   *Mountain View, CA*
- Improved user experience by creating an in-app portal to report errors and issues with the Lacework cloud security platform. This feature automatically creates corresponding customer support tickets on Zendesk whenever a user reports an issue.
- Collaborated with the customer support team and the UX team to develop the design for the tool. Worked with both the front end and back end teams to implement the tool using React, Java, and PostgreSQL.
- Designed and implemented new components for the Lacework UI library using React and Typescript.

ARC Evals | evals.alignment.org   July 2022 – September 2022
Software Engineering Intern   *Berkeley, CA*
- Improved the tools researchers utilize to interact with LLM agents by adding live updates to the web interface, so that researchers can view the results of their experiments in real time. Used Websockets, React, Flask, and OpenAI API.
- Increased performance of LLM agents by improving prompting strategies and adding heuristics to select the best completion.

Atlas Fellowship | atlasfellowship.org   May 2022 – July 2022
Software Engineering Intern   *Berkeley, CA*
- Created an online tournament platform for people to compete Python bots that play iterated prisoner's dilemma.
- Implemented using Docker API, Postgres, Rust, Typescript, and React. (github.com/pimpale/pdarena)

RESEARCH

Visual Machines Group | visual.ee.ucla.edu   September 2023 – June 2024
Machine Learning Researcher   *UCLA*
- Designed and implemented a neural network to predict gaze direction using pictures of the eye from inside a virtual reality headset. The model achieved a total angular error of only 0.85 degrees.
- Conducted research on using gaussian splatting to automatically create convolutional neural network (CNN) layers for 3D data. Used C++, CUDA and Pytorch.

Bolei Zhou Lab | boleizhou.github.io   March 2023 – April 2024
Machine Learning Researcher   *UCLA*
- Designed and trained an inverse dynamics model (IDM) to predict car steering input from velocity data. Used the IDM to create an offline reinforcement learning dataset, and benchmarked offline RL algorithms on the dataset.
- Wrote a sequence of reinforcement learning tutorials to teach students policy gradients, deep Q-Networks, TRPO, and PPO using the Metadrive environment. (github.com/pimpale/mdt)

AWARDS

- Grand Prize, 2019 Synopsys Science and Technology Championship

- 3rd Place, Intel International Science and Engineering Fair, 2019

PUBLICATIONS

Pimpale G*, Højmark A*, Scheurer J, Hobbhahn M. 2025. Forecasting Frontier Language Model Agent Capabilities. doi:10.48550/arXiv.2502.15850. arxiv.org/abs/2502.15850 *Under Submission*

Højmark A*, **Pimpale G***, Panickssery A, Hobbhahn M, Scheurer J. 2024. Analyzing Probabilistic Methods for Evaluating Agent Capabilities. doi:10.48550/arXiv.2409.16125. arxiv.org/abs/2409.16125 *Accepted at NeurIPS SoLaR workshop 2024*

Lermen S, Dziemian M, **Pimpale G**. 2024. Applying Refusal-Vector Ablation to Llama 3.1 70B Agents. doi:10.48550/arXiv.2409.16125. arxiv.org/abs/2410.10871 *Accepted at NeurIPS SafeGenAI workshop 2024*

*Equal contribution

ACTIVITIES

AI Safety at UCLA | aisafetyatucla.org   January 2022 – Present
President   *Los Angeles, CA*
- Founded and led a research-focused club on the topic of AI safety, which grew from 0 to 70 registered members in less than a year.
- Created a curriculum for a 6-week course to teach students the transformers architecture and several mechanistic interpretability techniques.

PROJECTS

Omegasus | github.com/pimpale/omegasus   Jan 2023 – March 2023
- Created a deep neural network simulation of the popular game Among Us using Reinforcement Learning and GPT-2.
- Implemented PPO to train both the crewmates and the imposters to make decisions based on the game state.
- Fine-tuned GPT-2 to simulate chat messages from players that depended on the game context.

WebGL Voxel Game | github.com/pimpale/webgl-voxel-game   April 2022 –June 2022
- Created a voxel game engine based off of Minecraft using only WebGL and Typescript.
- Implemented a chunk system, transparent blocks, lighting, shadows, and a basic physics engine.