Kevin Kim

+1 323-818-9815 | kimkj@usc.edu | Personal Website

Skills

- **Programming Languages:** Python, C++, Java, Bash, Lua
- **Data Science & Machine Learning:** PyTorch, Tensorflow, Cuda, SQLite, Slurm, Pandas
- **Simulation & Robotics:** Gymnasium, MuJoCo, Verilog, Soldering, Drone Manufacturing
- **Research Skills:** Linux, LaTex, WandB, Git, Seaborn, Keynote
- **Mathematical & Statistical Tools:** MATLAB, Numpy, Scipy, Matplotlib

Education

- **University of Southern California** *2023 - 2027*
  B.S. Applied and Computational Mathematics (Minor: AI Application) Los Angeles, CA
  ◦ Activity: GLAMOR Lab, Lira Lab, 3D4E, AI Safety Club, ACM, HackSC, Gardening Club

- **Deerfield Academy** *2019 - 2023*
  Secondary Education Deerfield, MA
  ◦ Summa Cum Laude, ACSL Nationals, AIME Qualifier, USACO Gold

Experience

- **LiraLab @ USC** *December 2023 - Present*
  Undergraduate Research Assistant Los Angeles, CA
  Skills: Slurm, Hydra, Wandb, Keynote
  ◦ Conduct multiple experiments to confirm hypothesis on various offline robot trajectory retrieval based on hand demonstrations. Visualize and analyze trajectory data. Weekly presentations and note taking during meetings.

- **HackSC** *August 2023 - December 2023*
  Backend Engineer Los Angeles, CA
  Skills: Postman, Node.js, Supabase, REST APIs, Docker, Git
  ◦ Developed an automated **judjing portal** for hackathons, leveraging heuristic-based evaluation to streamline scoring and enhance efficiency and maintained backend integrity through Supabase and developed secure endpoints.

- **Roborisen** *May 2022 - Sep 2022*
  AI Research Intern San Francisco, CA
  Skills: Python, Tensorflow, Pytorch, Cuda, Yolov3, Linux, Bash Scripting, LaTex
  ◦ Designed and created the **tutorial manual** for the Ping Pong AI Bot© leveraging TensorFlow and Yolov3.

Projects

All projects can be found on my Github Page

- **Distilling CLIP for Domain-Specific Zero-Shot Classification on LIBERO** *June 2024 - Present*
  Skills: CLIP, VLM
  ◦ Distilling CLIP for the specialized LIBERO dataset adapts it to unique poses while preserving zero-shot capabilities and avoiding the overfitting risks of small-data fine-tuning. Inspired from project ideas by Jesse Zhang.

- **APEM: A Paper Every Month** *September 2023 - Present*
  Skills: PyTroch, Wandb, Stable-Baseline3, Deep RL Algorithms
  ◦ Reproduce, implement, and critically evaluate significant research papers every month. So far implemented: CNN, RNN, DQN, PPO, Transformer, etc.

- **Dining Hall Food Wast Reduction (Junior Year Independent Study Project)** *September 2021 - March 2022*
  Skills: MLOps, OpenCV, Yolov3, Tensorflow, Data Pipelining
  ◦ Developed a food waste predicting system for my high school: from data collection to evaluation and deployment, leveraging custom metrics for performance assessment and heuristic methods for optimization.

Notable Coursework

A=Audit, C=Course Work, CT=Certificate, S=Self-Study

[C] Machine Learning (CSCI 567) | Markov Chains and Stochastic Processes (MATH 490) | Theory of Optimization (MATH 467) | Probability Theory and Statistics (MATH 407, 408) | Numerical Analysis (MATH 458) | Multivariate Calculus for Engineers (MATH 229) | Special Topics in Linear Algebra (MATH 471)

[CT] Tensorflow Developer Professional (Coursea) | Deep Learning Specialization (Coursea)

[S] Deep Reinforcement Learning (S. Levine, UC Berkley CS 285) | Reinforcement Learning: An Introduction (R. Sutton) | Deep Learning (I. Goodfellow)

[A] Data Science in Python (MATH 446) | Introduction to Robotics (CSCI 445)