Ian Ng

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Education

M.S. Computer Science, Stanford University — Expected 06/2025
GPA: 4.0/4.0; Advisor: Chelsea Finn

B.S. Computer Science, Stanford University — Expected 06/2024
GPA: 3.81/4.0; Advisor: Chelsea Finn
Relevant coursework: Reinforcement Learning, Deep Learning for Computer Vision, Robotic Control, Meta-Learning, Natural Language Processing, Probabilistic Graphical Models, Linear Algebra and Matrix Theory, Computer Systems, Operating Systems, Deep Generative Models, Algorithmic Analysis

Experience

Student Robotics Researcher, Stanford IRIS Lab — Palo Alto, CA — 06/2023-
- Investigate novel forms of meta-learning for robotic multi-task learning using Transformers, reinforcement learning techniques, and simulation software such as MuJoCo
- Expand on codebase for foundational meta-learning papers and apply existing foundational approaches to new environments as baselines
- Paper under preparation for International Conference on Learning Representations (ICLR) 2024

Student Robotics Researcher, Stanford IPRL Lab — Palo Alto, CA — 01/2023 -
- Compiled and designed novel benchmark tasks for robotic tool manipulation using MuJoCo and NVIDIA simulation software
- Conducted research on methods of accelerating motion policy training and simulation-to-real experience using reinforcement learning and model-predictive control.
- Paper submitted to International Conference on Intelligent Robots and Systems (iROS) 2023
- Paper under preparation for International Conference on Robotics and Automation (ICRA) 2024

Software Engineering Intern, Amazon — Seattle, WA — 06-09/2022, 06-09/2021
- Migrated product classification framework from legacy services to AWS to improve consistency, speed, and coding efficiency.
- Leveraged Java and JavaScript to create web-based tool allowing other engineers to efficiently locate and fix consistent misclassifications, saving up to 5,000 man-hours per year.

Student AI Researcher, Stanford Molecular Imaging Instrumentation Lab — Palo Alto, CA — 02/2021- 06/2021
- Employed generative adversarial networks to translate noisy simulated scans to denoised scans

Projects

SnakeCLEF- Tackling Long-Tailed Image Recognition Distributions — 04/2023-05/2023
Attempted prediction-balancing techniques for recognizing species of venomous snakes, forming a long-tailed distribution across high-variance images of snake species. Results submitted to ImageCLEF 2023 competition.

ViDescribe — github.com/tinglinn/vi-describe — 02/2023
A platform crowdsourcing visual descriptors of art for visually-impaired users, for TreeHacks 2023. Provided backend code, database development, and frontend design.

Using ROS and Computer Vision to Design Robot Rescue System — 09/2022- 12/2022
Utilized Robot Operating System (ROS) and implemented A* and RRT path planning algorithms to navigate robot through custom-built city worlds, included computer vision modules to recognize and avoid obstacles and points of interest

Quantifying LLM Capabilities — github.com/google/BIG-bench — 03/2021
Scraped web and processed large datasets of web information to provide benchmark dataset for analysis of existing language models, for Google BIG-bench language model benchmark set.

Skills

Languages: — Python, Java, C++, C, JavaScript

Deep Learning: — PyTorch, TensorFlow, Transformers, HuggingFace, SciKit-Learn, OpenCV, OpenAI Gym

Other: — Git, Hydra, AWS, Django, Google Developer Tools

Activities

Stanford Puzzle Hunt, President — 05/2023 -
Organize annual Stanford Puzzle Hunt with over 400 participants, including directing puzzle-writing team, sponsorships, and technology backend

Stanford Association for Computing Machinery, President — 08/2022 - 05/2023
Led team of officers that conducted workshops teaching multiple branches of computer science to beginning undergraduates, including machine learning, game development, and web design; worked with sponsors to host speaker series and competitions