Annabel Ng

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EDUCATION

UC Berkeley   Expected May 2026
BS Electrical Engineering and Computer Science - GPA 3.7   *Berkeley, CA*
- **Coursework:** Operating Systems, Machine Learning, Computer Graphics, Algorithms, Computer Security, Data Structures, Computer Architecture, Linear Algebra and Optimization Models, Discrete Math and Probability
- **Awards:** Cal Alumni Association Leadership Scholar, Google Cloud Next '23 Student Innovator
- **Clubs:** Accel Scholars, Machine Learning @ Berkeley, Association of Women in EECS, Society of Women Engineers

TECHNICAL SKILLS

Languages & Tools: Python, Java, C, C++, Rust, SQL, Go, JavaScript, HTML/CSS, Git, Vim, Unix, AWS, Jupyter
Frameworks & Libraries: PyTorch, TensorFlow, JAX, Semantic Kernel, LangChain, Pandas, Hugging Face, React, Flask

EXPERIENCE

Google   Aug 2025 – Present
Software Engineering Intern - YouTube Hardware Acceleration Team   *Mountain View, CA*
- Integrating JAX-based quantized ML models with YouTube's custom accelerator ASIC (Argos) for video transcoding by converting models into graphical representations for silicon protobufs and running quantization aware training

Microsoft   May 2025 – August 2025
Software Engineering Intern - AI Language Team   *Redmond, WA*
- Enhanced one of 9 official AI Foundry customer templates by integrating a multi-agent conversational framework via Semantic Kernel, leveraging custom agents with Azure AI Translation and Azure Language Services (CLU, CQA)
- Open-sourced contributions on GitHub (60+ stars, 50+ forks) with 400+ customer provisions on Azure in a month
- Collaborated with the Semantic Kernel team to identify and fix bugs in agent orchestration techniques

Autodesk   May 2024 – August 2024
Machine Learning Engineering Intern   *San Francisco, CA*
- Developed a Wiki security screening pipeline using GPT-4 that processed over 15,000 pages to identify confidential information such as API keys, usernames/passwords, and IP hostnames
- Finetuned and deployed text classification models (DeBERTa and Llama3) using AWS Lambda to automatically route User Support Jira tickets, reducing engineer overhead by 80% per ticket

AI Racing Tech: Top US Indy Autonomous Racing Team   Mar 2024 – Dec 2024
Perception Team Researcher   *Berkeley, CA*
- Implemented a key data annotation pipeline using YOLO to label opponent Formula 1 cars across 40TB of data
- Conducted experiments to optimize bounding box size and confidence thresholds for opponent vehicle detection

Cubic Transportation Systems   Jun 2023 – Aug 2023
Software Engineering Intern   *Boston, MA*
- Designed and developed a full-stack web application for the Boston MBTA transportation system using Flask and React to monitor over 300 devices, as well as critical various sales and ridership statistics prior to the pilot phase

LEADERSHIP

Machine Learning @ Berkeley   Sep 2022 – Present
Workshops Lead and Education Officer   *Berkeley, CA*
- Established free inaugural all-day high school bootcamp to introduce 80+ under-served local high school students to machine learning through interactive workshops, NLP and computer vision projects, and campus tours

PROJECTS

N3CTAR - Neural 3D Cellular Tessellated Automata Rendering | *Python, PyTorch, VisPy*   May 2025
- Developed a 3D triangle mesh to 3D voxel pipeline utilizing Barycentric coordinates and FloodFill
- Implemented a real-time interactive renderer for a trained 3D convolutional neural network (simulating neural cellular automata) to enable user-driven voxel destruction and regeneration

PUBLICATIONS

- C. Kymn*, S. Mazelet*, **A. Ng**, D. Kleyko, and B. Olshausen. "Compositional Factorization of Visual Scenes with Convolutional Sparse Coding and Resonator Networks". *In: Proc. of Neuro Inspired Computational Elements (NICE) Conference. 2024*