

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 – Oct 2025

Software Engineering Intern - YouTube Hardware Acceleration Team

Mountain View, CA

- Extracted JAX model topologies by developing a custom intermediate representation parser and converting them into a standardized silicon protobuf format for deployment on Argos, YouTube's custom video transcoding ASIC
- Mapped quantization configurations from QKeras to AQT (a JAX quantization library), deriving scale factors and numerical bounds to ensure framework equivalence by achieving quantized bitwise weight matches
- Designed and benchmarked post-training quantization (PTQ) and quantization-aware training (QAT) pipelines for JAX models, achieving performance parity with established Keras QAT methods

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)
- Accelerated community growth post-contribution, doubling GitHub stars and forks (30 to 75+) within 3 months
- 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

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*