

Jonathan Pan

📍 Irvine, CA ✉ j____@uci.edu ☎ +1-(xxx)-xxx-xxxx in jonathanypan 📱 jonnypan2325 🇺🇸 U.S. Citizen

Education

University of California, Irvine

Expected June 2027

B.S. in Computer Science

- **Coursework:** Data Structures & Algorithms, AI/ML, Data Mining, Database Management, Computer Vision

Experience

Software Engineering Intern

June 2026 – Present

MyCase (8am)

San Diego, CA

- Created Documents QuickView, a **Rails** and **React** document preview feature, cutting preview time from **~6s to sub-second**.
- Extended a **LangGraph** AI document-generation workflow, building a clause-adaptation node for template-based generation that cut average revision iterations from 6 to 3 per document.
- Improved AI clause search over a **Neo4j** knowledge graph using OpenAI embeddings, raising relevant-clause recall by 25%.
- Shipped **TypeScript** APIs for a **tiptap** rich-text legal editor, letting hosts enable or disable formatting controls.

Software Engineering Intern

Sept 2025 – June 2026

Canon U.S.A. – Future Services

Irvine, CA

- Built a **GCP** document platform using **Gemini on Vertex AI** to classify and extract data for **5 production tenants**.
- Shipped **pessimistic document locking** solo: lease-based **Firestore** locks synced live via **WebSockets**.
- Cut document cold-load latency **53%**, from **30s to 14s**, by deferring page rendering and running AI classification in parallel.
- Engineered the AI classification and extraction pipeline to a **<8% error rate** across **50+ document types**.
- Integrated the platform with Canon's enterprise document management system, shipping reliable large-file uploads.

Software Engineering Intern

June – Sept 2025

Canon U.S.A. – Service Automation Tools

Irvine, CA

- Developed an AI (**RAG**) support chatbot on **Azure** over **300K+** manuals, cutting Mean Time to Repair by **20%**.
- Reduced AI inference costs by **40%** through document filtering and prompt compression.
- Raised technician First-Time Fix Rate to **72%** by tuning search and prompts based on **A/B tests**.

Student Researcher

April 2024 – Present

U.C. Irvine – BIASLab

Irvine, CA

- Engineered a **PyTorch CycleGAN** for privacy-preserving object detection, retaining **87%** of original accuracy (mAP).
- Designed a spectral decoding framework for **audio language models**, reducing input token counts.
- Created and annotated a **2,000+** image dataset for evaluating privacy-preserving computer vision models.

Software Engineering Intern

July – August 2024

Altek Medical

Hsinchu, Taiwan

- Built a **Java** DICOM pipeline for 1080p video, reducing latency to **<200ms** per frame to support real-time data streaming.
- Implemented **TLS** encryption to securely archive patient media and metadata in a **PostgreSQL** PACS server.

Leadership

Projects Chair | *Artificial Intelligence at UCI*

July 2024 – Present

- Authored an ML tutorial series (linear classifiers → **CNNs**) and mentored students on projects in **Python/PyTorch**.
- Taught members to build **multi-agent workflows** for coding with verification loops and multi-role decomposition.

Projects

Street-Art | *Python, Node.js, Tailwind, Firebase, Git*

- Built a web app transforming uploaded images into navigable GPS routes (“GPS Art”) for Strava runners and cyclists.
- Implemented **Iterative Closest Point (ICP)** to align sketches with street topology and **NetworkX** for route optimization.

Vroommates | *Python, React, Flask, Google Cloud, Vercel, Git*

- Built a carpool platform matching drivers and riders via route algorithms with **Google Maps**, Flask, and React.

Skills

Languages: Python, TypeScript, JavaScript, Ruby, Java, C++, SQL

AI/ML: Vertex AI (Gemini), PyTorch, LangGraph, RAG/GraphRAG (Neo4j), OpenAI embeddings, prompt engineering, OCR

Cloud/DBs: GCP (Cloud Run, Firestore, GCS), Azure, AWS, PostgreSQL, Terraform (IaC), Docker

Frameworks/Tools: FastAPI, React, Node.js/Fastify, Next.js, Vitest, Playwright, GitHub Actions CI/CD, Agentic Coding