

Leonard Jia

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EDUCATION

University of Southern California

Masters of Science, Computer Science, Concentration: Artificial Intelligence

May 2028 — Los Angeles, CA

Gonzaga University

Bachelors of Science, Computer Science

May 2026 — Spokane, WA

TECHNICAL SKILLS

Languages: Python, C/C++, C#, Java, JavaScript, R, SQL, Swift

AI Tools: Claude Code, Cursor, MCPs, skills, Federated Learning, Differential privacy

Technologies: Git, Docker, PyTorch, PyTest, PyQt, Node.js, React.js, Firebase, PostgreSQL, OpenAI API

EXPERIENCE

Gonzaga Institute for Informatics and Applied Technology

October 2025 – May 2026

Research Assistant

- Investigating Federated Learning and Differential Privacy techniques for healthcare and finance applications.
- Designed and tested **MCP** server functions for a Wazuh cybersecurity platform, implementing tools across alert management, vulnerability management, agent monitoring, and security analysis categories
- Contributed to implementation of research experiments, data preprocessing, and performance evaluation

Fast Enterprises

May 2025 – August 2025

Software Engineer Intern (Implementation)

- Engineered **C#** applications managing 300,000+ professional license accounts across state licensing systems.
- Optimized **SQL** queries for data extraction, validation, and transformation, improving system performance by 20%
- Consulted with 48 licensing boards and commissions to gather requirements and align technical solutions.

PROJECTS

Image Processing App

August 2025 – May 2026

- Built a desktop application for image editing using **PyQt** and implemented **CNN**-based feature extraction using pre-trained VGG16 and ResNet50 models and computed pairwise image similarity via cosine similarity.
- Packaged the app as a standalone executable for Windows and macOS using PyInstaller.

Intelligent Face Recognition & Management App

January 2025 - May 2025

- Developed web application for automated photo organization using facial recognition and machine learning.
- Implemented facial detection and embedding generation using DeepFace with a **TensorFlow/PyTorch** backend, enabling demographic analysis and similarity-based search via a Pinecone vector database.

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February 2026

- Constructed a real-time computer vision pipeline for weightlifting form correction, combining Apple Vision with a custom **YOLOv8** object detection model exported to **Core ML** for an on-device barbell tracking.
- Engineered a biomechanics rule engine (22+rules across 6 exercises) using angle calculations to detect form issues, with severity-based feedback.

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February 2025

- Developed full-stack web platform integrating Terra API and wearable devices to track fitness metrics.
- Implemented AI-driven insights using **OpenAI API**, streak-based motivation system, and real-time progress tracking with **React.js/Redux** frontend and Flask backend.

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February 2024

- Created a prototype iOS recipe-sharing and social networking app, UI/UX in **Figma** and the front end in **Swift**.
- Architected a **Firebase** backend with custom data structs to support user profiles, recipe posts, and cross-account visibility of shared content.