

# WESLEY CHOU

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## EDUCATION

### University of Central Florida

Bachelor of Science in Computer Science | GPA: 3.57/4.0 | Dean's List

Aug 2023 – May 2026

Orlando, FL

### University of Central Florida

Master of Science in Computer Science - Accelerated Program

Aug 2026 – May 2027

Orlando, FL

## PROFESSIONAL EXPERIENCE

### Sound Haus (UCF Upstarts Incubator 2025)

Cofounder, Backend Engineer

Aug 2025 – Present

Orlando, FL

- Built GitHub-like music versioning platform using React, FastAPI, and Supabase with dockerized Gitea services, implementing CI/CD pipelines and Agile Scrum methodologies for reliable development workflow
- Pitched to C-level executives at GitHub and venture capitalists, securing acceptance into highly selective UCF startup incubator program (10% acceptance rate)

### UCF College of Optics and Photonics

Undergraduate Research Assistant - Augmented Reality

Aug 2025 – Present

Orlando, FL

- Developed and fine-tuned pupil-detection deep learning models in Python using TensorFlow and OpenCV on 30,000+ image dataset, improving gaze detection accuracy by 15% and reducing AR system power consumption by 20%
- Implemented corneal reflection recognition algorithms to enhance eye-tracking system reliability in variable lighting conditions

### Goldman Sachs

Software Engineer Intern

May 2025 – Aug 2025

Dallas, TX

- Architected and deployed full-stack data visualization dashboard using Java Spring Boot, React, and MongoDB to display investment and team KPIs, saving 2 global business divisions 150+ hours of labor annually by enabling data-informed business strategy
- Engineered data aggregation pipelines and RESTful APIs processing millions of investments, reducing processing time by 75% through optimized database queries and caching strategies
- Owned full-cycle development and release of 10 features in an Agile environment, achieving 95%+ code coverage through comprehensive unit and integration testing, with weekly stakeholder communication
- Won 1st place in firmwide AI Hackathon (300+ participants) by implementing a LangChain RAG system to automate support ticket routing and resolution, reducing response time by 60%

### Lockheed Martin

AI Logistics Product Intern

Jan 2025 – May 2025

Orlando, FL

- Architected and deployed Retrieval-Augmented Generation (RAG) system using Python, LangChain, Streamlit, and vector databases (Pinecone), reducing manual data entry by 80% and accelerating risk analysis workflows for 50+ reliability engineers
- Designed technical roadmaps and pitched 3 AI product concepts to senior leadership, securing executive funding to scale RAG system to 2 reliability engineering divisions serving 100+ engineers
- Completed internal ML curriculum covering unsupervised learning, NLP, and pipeline design, applying Scikit-learn, Pandas, and NumPy to evaluate technical feasibility for enterprise AI initiatives

## PROJECTS

### Emergent - AI Crisis Simulation Platform | FastAPI, Next.js, React, TypeScript, Google Gemini, Google ADK

Oct 2025

- Achieved 1st Place Best Overall Hack at KnightHacks 2025 (188 projects, 800+ participants) and 2nd Place in Google's Autonomous Agent Challenge
- Engineered AI-powered crisis simulation platform using Google Agent Development Kit (ADK) to programmatically generate and orchestrate 50 concurrent AI agents, enabling emergency managers to test response plans against dynamic virtual communities
- Developed responsive Next.js frontend with interactive GIS mapping (React Leaflet) to visualize real-time persona reactions, integrated with high-performance Python FastAPI backend serving disaster scenario analytics

### InsightAI - AI-Driven UX Research Tool | OpenCV, TensorFlow, Python, React, Gemini API

Sept 2025

- Built AI-powered UX research tool using OpenCV and TensorFlow to process eye-tracking data and heatmaps, translating behavioral patterns into actionable design recommendations via Gemini API
- Developed React dashboard for real-time visualization of user interaction patterns, accelerating design-to-code iteration cycle by 40% for UX researchers

## TECHNICAL SKILLS

**Languages:** Python, Java, C/C++, TypeScript, JavaScript, SQL, HTML/CSS

**Frameworks/Libraries:** React, Next.js, Spring Boot, FastAPI, Node.js, Express.js, Flutter, TensorFlow, PyTorch, LangChain, Pandas, NumPy, Scikit-learn

**Tools & Technologies:** Git, Docker, Kubernetes, Linux, CI/CD, Agile/Scrum, RESTful APIs

**Databases:** MongoDB, PostgreSQL, Supabase, Pinecone, MySQL