Jerry Zhang

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EDUCATION

University of Southern California, Viterbi School of Engineering and Marshall School of Business　　　May 2026
Bachelor of Science, Computer Science and Business Administration　　　GPA: 3.83
- **Honors:** USC Trustee Scholar (full-tuition, < 1% out of 8K students); Flanagan Scholar ($10K); Viterbi Fellow ($3K)
- **Relevant coursework:** Intro to Programming, Data Structures, Algorithms, Object Oriented Programming, Linear Algebra
- **Activities and Societies:** SEP-USC's premier incubator (Director of External Affairs), Code the Change, Quant SC

EXPERIENCE

Keepsake - Estate Planning Startup　　　May 2024 - Present
Software Engineer Intern
- Implement core technology behind Keepsake like user dashboard, matters intake, and legal services with 20+ components for B2C and B2B clients, acquiring strategic partnerships with **30+ new law firms** - *Next.js, AWS, Stripe*
- Optimize database schema design with a **30%** improvement in data storage and retrieval efficiency - *MongoDB*
- Reduce code debt by **10%** through code reviews by troubleshooting 50+ peer technical issues

USC Cyber-Physical Systems Design (DesCyPhy) Lab　　　Aug 2023 - Present
Research Assistant
- Experiment with **RViz** and **Gazebo** simulation-based testbeds to replicate real-world scenarios for self-driving vehicles within the Robot Operating System (**ROS**) environment - *C++, Linux, Git, Vim*
- Enhance PID wall detection and deep learning autonomous driving algorithms by fine-tuning parameters in a **Neural Network** comparison experiment, resulting in a **15%** improvement in accuracy for self-driving tasks - *Python*
- Integrate the simulator with the **NVIDIA Jetson** driver stack to implement algorithms onto the physical F1tenth car - *C++*

RaiseAChild - 501(c)(3) nonprofit　　　Sep 2023 - May 2024
Full-Stack Developer
- Created user-friendly internal data visualization dashboard for nonprofit RaiseAChild - *Next.js, FastAPI, AWS RDS*
- Improved report generation efficiency by **100%** by processing **40K+** constituents and events to provide actionable insights
- Collaborated with a team of **10+** other developers, designers, and PMs to manage project scope and service customers

Utopia Labs　　　May 2023 - Aug 2023
Software Engineer Intern
- Developed a full-stack web application allowing users to check transaction fees spent on a safe address as a growth hacking technique for a ~**$100MM** crypto unicorn, resulting in a **10%** rise in user engagement and organic site traffic - *TypeScript*

PROJECTS

Clinicode - AI Medical Coding Startup, *Co-Founder, Product Manager*　　　Sep 2023 - Present
- Secured **$16K grant** from USC to innovate AI-driven medical coding solutions using **sentence-transformers** and **decision tree classifiers**, resulting in a **96%** reduction in medical coding time and a **90%** cost reduction for clinics - *Next.js, Firebase*
- Realized **100%** automation of medical coding through Electronic Health Record integration using **REST APIs**
- Established partnerships with **12** USC, UCLA, and NYU affiliated hospitals for R&D activities and customer acquisition
- Incorporated **Agile Methodology** of both **Scrum** and **Kanban** to enhance team communication; demo available at Clinicode

Autonomous Litter Detection and Retrieval Machine (ALDAR)　　　Sep 2023 - Dec 2023
- Designed a convolutional neural network (**YOLOv5**) robot to detect and retrieve litter with **95%** accuracy; ALDAR - *Python*
- Trained on a custom labeled dataset of **1612** images with augmentations, reaching a confidence level of **0.9** - *Roboflow*
- Programmed microcontroller to modularly control a robotic arm with 3D printed components and five servo motors - *Arduino*

SKILLS

Languages: C/C++, Java, Python, HTML, CSS, Javascript, TypeScript, SQL
Technologies: React, Git, Figma, Linux, Vim, Firebase, Next.js, REST API, MongoDB, PostgreSQL, Node.js, Express.js