Pinran (Jason) Cheng

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Education

University of California, Los Angeles   Sept. 2021 – June 2025

- Bachelor of Science in Computer Science
- GPA: 3.98
- Coursework: data structures, algorithms, software construction, operating systems, signal processing, programming languages, formal languages, compiler construction, multivariable calculus, linear algebra, computer vision
- Clubs: CS honor society Upsilon Pi Epsilon officer, Association of Computing Machinery Rustaceans officer

Experience

Daily Bruin Full Stack Software Engineer   Oct. 2021 – Present

- Redesigned the homepage and professor pages using Django/Javascript/CSS on bruinwalk.com, a professor rating site used by over 18k UCLA students, for a more modern appearance and significantly more simplified/maintainable code
- Collaborated with UI/UX designer to standardize colors by usage to support switching color palettes for accessibility
- Organized a web auditing competition and deployed dummy infrastructure (Kubernetes cluster, S3 bucket, and PostgreSQL database) for end-to-end vulnerability testing

Wind River Software Engineering Intern   June 2022 – Sept. 2022

- Developed test procedures in C for the VxWorks kernel message queue component to achieve aerospace certification
- Implemented table-driven programming in the test procedures and achieved 100% MC/DC coverage for all functions
- Wrote comprehensive documentation explaining environment installation, Cert workflow, and troubleshooting tips for onboarding future Cert developers

Major League Hacks Open Source Fellow   Jan. 2022 – Apr. 2022

- Designed unit tests to verify the reliability of Facebook's Android native debugger

Projects

MiniJava Compiler for a subset of Java into RISC-V, written in functional-style Java

- Designed an aggressive register allocator that achieves over 2.5x better performance than linear allocation

fa-builder Finite automaton drawing and analysis tool

- Generates beautiful SVG state diagrams; second only to LaTeX
- Written in functional-style TypeScript and available at fa-builder.jcfp.site

TRAINER React Native exercise assistant to count workout reps

- Trained the TensorFlow OpenPose AI model and used it to classify workouts from a live camera input
- CincyHacks 2021 "Most Popular" winner (out of 17 teams)

Awards

- 2020 American Invitational Mathematics Examination top 15%
- USA Computing Olympiad Silver Division

Skills

- Programming languages: C, C++, Rust, OCaml, Java, Prolog, Python, JavaScript, Perl, Bash
- Tools/frameworks: HTML, CSS, Git, Linux, Django, React, Docker, Kubernetes, LaTeX
- Languages: English, Mandarin Chinese