

Jacob Lin

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EDUCATION

- **University of California, San Diego** La Jolla, CA
Bachelor of Science in Computer Science - GPA: 3.8 Oct. 2020 - Jun. 2024
 - **Courses:** Computer Vision, Machine Learning, Operating Systems, Algorithms, Advanced Data Structures, Software Engineering, Relational Databases, Theory of Computation, Computer Architecture

EXPERIENCE

- **MaXentric Technologies LLC.** La Jolla, CA
Software Engineer Intern Jun 2022 - Sep 2022
 - Developed **MAC** driver for embedded 5G millimeter-wave networking device on **Xilinx FPGA** using **C** and **FreeRTOS**, to push the research project into phase 2.
 - Reduced testing costs by \$100,000 by virtualizing the MAC layer in a scalable node network through the deployment of multiple **VirtualBox** and **VMWare** VMs.
 - Improved the reliability of the communication between network devices by 90% by implementing a frame check sequence using **Python**, **C**, **RTOS+TCP/IP sockets API** and **Wireshark**.
- **UCSD CSE Department** La Jolla, CA
CSE Instructional Assistant Sep 2021 - Jun 2022
 - Tutored for Basic Data Structures (in **Java**), Intro to Programming (in **Python**).
 - Resolved 500+ tickets through office hours helping students learn functions, loops, debugging, data structures, etc. with 95%+ positive feedback.
 - Supported instructor in providing challenging, and supportive classroom environment for students by providing timely feedback and grading, and communicating suggestions for improvement at staff meetings.

PROJECTS

- **Mangrove Monitoring Image Classification Tool**
 - Collaborated with team of 7 following **SCRUM** methodologies to develop web-based solution enabling scientists to upload aerial/satellite images and receive accurate classifications, enhancing mangrove conservation efforts.
 - Led frontend development efforts, leveraging **React.js** and **JavaScript** to design and code the main visualization page and create responsive components such as dropdowns, buttons, and progress bar, improving user experience.
- **ignis**
 - Built an interactive frontend using **TypeScript** and **Mapbox API** to display weather data on a map of U.S. gathered using **OpenWeather API** in the backend to predict chance of wildfires winning Best Design.
- **uwu-wegistew**
 - Shared results of research on internet "uwu-speak" through developing the static frontend of webpage and navigation using **React.js**, **JavaScript**, **HTML**, **CSS** and **AntDesign API**.
- **Zooseeker**
 - Created **Android** app to compute routes through San Diego Zoo using **Android Studio**, **Java**, **Google Maps API** following OOP software design patterns like **Model View Controller** and dependency inversion.
 - Managed team of 6 following **AGILE** methodologies, ensuring quality code and collaboration.

LEADERSHIP

- **Association for Computing Machinery at UCSD** La Jolla, CA
Vice President Membership May 2022 - Present
 - Led team of 5 in organizing weekly social events to expand our community of 1000+, successfully increasing member engagement and attendance by 25%.
 - Facilitated team planning meetings and 1:1 check-ins to ensure effective collaboration and communication increasing team morale and productivity resulting in successful events with high member satisfaction.
 - Promoted equity, diversity, and inclusivity in ACM by collaborating with other organizations and organizing events to create a welcoming environment for all members.

PROGRAMMING SKILLS

- **Languages:** Python, JavaScript, C/C++, Java, HTML, CSS, SQL, Unix, ARM, x86, System Verilog
- **Technologies:** Git, React, Node, PyTorch, MongoDB, OpenCV, Android Studio, VMWare, Express, Flask