# Robert Jiang

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## Education

**University of California San Diego** Sep. 2020 – Mar. 2023

*B.S., Computer Science – Regents Scholar, Provost Honors* *3.85 (Cumulative) – 3.94 (Department)*

## Relevant Coursework

Algorithms, Data Structures, Software Engineering, Operating Systems, Computer Architecture, Computer Organization, Compilers, Programming Languages, Digital System Design, Software Tools, Computer Vision, Computability Theory, Linear Algebra, Discrete Math, Statistics

## Relevant Experience

**Software Engineering Intern** June 2022 – Present

*Werfen* *San Diego, CA*

- Implemented, tested, and contributed to the design of an electronic system verification test suite for a medical device.
- Added telemetry data for multiple components and subsystems of a medical device using design patterns and object-oriented programming.
- Created and executed test cases for multiple bug fixes and changes for a medical device.
- Reviewed code changes and updated documentation to reflect code, design, and workflow changes, case studies, and development logs for a medical device.

**Electrical Engineering Intern** June 2019 – Aug. 2019

*Tubis Technology* *Pasadena, CA*

- Designed an evaluation PCB in Altium Designer by schematic entry: designed the PCB layer stackup, selected and placed components, inserted vias, routed traces, and added labels and identifiers.
- Implemented an Arduino program and Python script to visually represent bytes from an input stream on a breadboard wired with 8 LEDs.

## Primary Projects

**Dynamic Display Settings Switcher (DDSS)** | *Python*

- Created an executable program for Windows laptops that automatically increases or decreases display settings (resolution, refresh rate, and brightness) when connected or disconnected from power.
- Features a system tray application for manually changing resolution and refresh rate with a single click and a configuration file for storing and changing user-defined display setting profiles.
- Utilizes a number of Python libraries including $pywin32$, $psutil$, $wmi$, $threading$, and $pystray$.

**Feather** | *Android (Java), Google Nearby Messages API, Room API, Git & ZenHub*

- Developed an Android social networking app that recommends students to each other based upon previously taken course criteria as part of the WI22 CSE110 group course project.
- Implemented and iteratively tested multiple features: Bluetooth message sending and receiving via *Google Nearby Messages API*, data storage and persistence via *Room API*, sorting, filtering & matching algorithms, UI view handling upon user actions, etc.
- Used version control, agile development techniques, and design patterns and principles throughout development.

**JARchitecture** | *SystemVerilog, Python, Java, ModelSim, Quartus Prime*

- Developed an accumulator and load-store hybrid computer architecture in *SystemVerilog* with a *Python* assembler and a MIPS-esque ISA as part of the SP22 CSE141L group course project.
- Implemented and tested three programs (hamming coder, hamming decoder, pattern counter) in JARchitecture instructions and *Java* to demonstrate architecture functionality and practical viability.

## Technical Skills

**Languages**: C/C++, Python, Java, Haskell, VHDL, Verilog/SystemVerilog, ARM/MIPS/X86
**Frameworks**: JUnit, Robolectric, Espresso
**Developer Tools**: Android Studio, STM32Cube, Arduino, ModelSim, Quartus Prime, Git
**Libraries & APIs**: NumPy, Google Nearby Messages, Room
**Techniques**: Agile Development, Design Patterns, Object-Oriented Design