Robert Jiang

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Education

University of California San Diego 09.2020 ⟼ 03.2023
B.S., Computer Science | *Regents Scholar, Provost's Honors* *3.85 / 4.00*

Relevant Experience

Software Engineer Intern 06.2022 ⟼ Present
Werfen *San Diego, CA*

- × Implemented and tested multiple new features or modifications for a medical device including designing an electronic system verification test suite and extending the telemetry and serial interfaces.
- × Merged over a dozen commits and made 6,000+ code contributions via the use of object-oriented programming and design patterns.
- × Created and executed test cases for 8+ bug fixes and/or changes.
- × Reviewed over a dozen changes and updated multiple specification documents accordingly to reflect code, design, and workflow changes, case studies, and development logs.

Electrical Engineer Intern 06.2019 ⟼ 08.2019
Tubis Technology *Pasadena, CA*

- × Designed an evaluation PCB in *Altium* 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 an LED circuit.

Primary Projects

Dynamic Display Settings Switcher (DDSS) | *Python*

- × Created a system tray application for Windows laptops that switches display settings (screen resolution, refresh rate, and brightness) when connecting or disconnecting from power.
- × Implemented an easy one-click resolution and refresh rate switch feature and a configuration file for storing and changing custom user-defined display setting profiles.
- × Wrote 500+ lines of code and utilized a variety of Python libraries including $pywin32$, $psutil$, wmi, $threading$, and $pystray$.

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

- × Developed an *Android* social networking app in *Java* that recommends students to each other based upon specific course criteria (# of shared courses, recency of shared courses, etc.).
- × Implemented and iteratively tested multiple features including Bluetooth message sending and receiving via *Google Nearby Messages API*, data storage and persistence via *Room API*, sorting/filtering/matching algorithms, and UI view handling via design patterns and object-oriented programming.
- × Merged 70+ commits and made 25,000+ code contributions.

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.
- × Implemented 3 programs/algorithms in *JARchitecture* instructions then verified program correctness using *Java* to demonstrate architecture usage and functionality.
- × Merged 15+ commits and made just shy of 10,000 code contributions.

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