

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 & RECENT EXPERIENCE

Software Engineer Intern

06.2022 → Present

Werfen

San Diego, CA

- × Implemented and tested multiple new features and modifications for a medical device including designing an electronic system verification test suite and extending the existing telemetry and serial interfaces.
- × Merged 12+ commits and made 6,000+ code contributions via the use of embedded programming, object-oriented programming, and design patterns.
- × Created and executed test cases for 8+ bug fixes and/or changes.
- × Reviewed 12+ changes and updated multiple specification documents accordingly to reflect code, design, and workflow changes, case studies, and development logs and tutorials.

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* and *Python* development and debugging tool that visually represent bytes from an input stream on LEDs.
- × Created multiple EMI shielding nets in *AutoCAD* that can be folded, secured, and placed by hand on proprietary PCBs.

PRIMARY & RECENT PROJECTS

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

- × Developed an *Android* social networking app in *Java* that recommends close proximity students to each other based on specific course criteria (number 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.

Dynamic Display Settings Switcher (DDSS) | Python, pywin32, psutil, wmi, threading, pystray

- × Created a system tray application in *Python* from scratch with 500+ lines of code for Windows laptops that automatically switches display settings (screen resolution, refresh rate, and brightness) when connecting or disconnecting from power.
- × Implemented an easy 1-click manual resolution and refresh rate switch feature via *pystray* and a configuration file for storing and changing custom user-defined display setting profiles.

Tracktivity Discord Bot | Go, DiscordGo, Discord API

- × Developed a Discord bot in *Go* from scratch with 900+ lines of code that continually tracks user and server activity and reports a specific user's info, activity, and status (*Tracktivity* profile) upon another user's request through commands.
- × Implemented 2 command handlers and 12+ Discord event handlers using *DiscordGo* to handle, generate, and send Tracktivity profile reports via Discord messages and update internal data structure and object data respectively.

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

TECHNICAL SKILLS

Languages: C/C++, Java, Python, Go, Haskell, VHDL, Verilog/SystemVerilog, ARM/MIPS/X86

Frameworks: JUnit, Robolectric, Espresso

Tools: ModelSim, Quartus Prime, Git, JIRA, Confluence, LaTeX, Markdown

Libraries, APIs & Environments: Android, Arduino, STM32Cube, NumPy, Google Nearby Messages, Room, Discord

Techniques: Agile/Scrum/Kanban, Design Patterns, Object-Oriented Design