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*
- Assembled a breadboard containing eight active high LEDs and implemented an Arduino program and Python script to visually represent bytes from an input stream.
- 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.

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