NICHOLAS J. BATTANI

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EDUCATION

Iowa State University | B.S. of Computer Engineering | Expected Graduation: May 2021
Cumulative GPA: 3.44/4.00 | Focus on Embedded Systems
Relevant Coursework: Computer Architecture and Assembly Level Programming, Operating Systems, Embedded System I, Integrated Electronics, Project Management, Analysis of Algorithms, Data Structures

SKILLS

Proficient Languages: C, Python, C++, VHDL
Familiar Languages: Java,C#, MIPS Assembly, JavaScript, Verilog, Perl,VBA

TOOLS AND FRAMEWORKS: Git, Linux/Unix, Android Studio, HTML/CSS, CI/CD, Springboot, ModelSim, Vivado, MATLAB, Selenium

PROFESSIONAL EXPERIENCE

IBM | Post-Silicon Validation Intern **June 2020 - Present**

- Developed Python automation scripts to turn hour-long tasks into a two second execution time.
- Utilized in-house testing frameworks to perform failure analysis on IBM POWER9 & 10 chipsets.
- Assisted in the maintenance of module-level automated test frameworks built in Java, Python, and Perl.

Xpanxion | Software Engineering Intern **Sep. 2019 – Oct. 2019**

- Configured automation software using Java combined with selenium to automate web app testing.
- Engaged with Git, CI/CD, and an agile development environment to increase productivity.

Lockheed Martin Space | Test Engineering Intern **May 2019 – Aug. 2019**

- Implemented a critical hardware monitoring web application using Flask and jQuery.
- Automated the task of scheduling test engineering shifts using VBA, saving 10 hrs/manager monthly.
- Maintained MATLAB report generating software to automate presentation creation, saving 30 hrs/engineer quarterly.

May 2018 – Aug. 2018

- Consulted senior engineers to create an electronic-parts database using Microsoft Access.
- Performed and later automated queries, data imports, and report generation using SQL, saving 2 hrs/day.

WORK EXPERIENCE

Iowa State University | Teaching Assistant | Embedded Systems I **Jan. 2020 – May 2020**

- Lead labs focused on using C programming to manipulate an ARM microcontroller.
- Wrote study guides for tests that covered C, GPIO, UART, and microcontroller basics.
- Hosted review sessions with 75+ students in attendance.

Iowa State University | Teaching Assistant | Computer Architecture **Jan. 2020 - May 2020**

- Expedited MIPS processor simulation using Python to catch pre-silicon errors.
- Facilitated labs on implementation of single-cycle and pipelined processors using VHDL.

Iowa State University | Teaching Assistant | Intro Electronic Circuits **Aug. 2019 – Dec. 2019**

- Taught labs on electronic circuits using physical components such as resistors and op-amps.
- Troubleshot student circuits using oscilloscopes and multimeters.

PROJECTS EXPERIENCE

Self-Playing Guitar **September 2020**

- Implemented an integrated hardware/software design using C and Arduino to have a guitar play a song.
- Configured Arduino GPIO ports to control servo motors and LEDs.

iRoomba Mars Rover **May 2019**

- Worked in concert with lab partners to program an iRoomba to navigate Mars obstacle course using C.
- Utilized iRoomba sensors and motors via C and the iRoomba Open Interface.