Jorge Del Rio

Bachelor of Science in Electrical and Computer Engineering | Minor in Software Engineering

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Core Technologies & Skills

Languages: Python | C/C++ | JavaScript | Java | Verilog | HTML/CSS | MatLab
Software: VS Code | PyCharm | CLion | X-Code | Vivado | PSpice | GitHub | Jama | Adobe
Tools/Skills: Bilingual | Soldering | Circuit Modeling | Software Application/Testing | Data Analysis

Academic Experience **Date**

Electrical/Computer Engineer, *Automatic Plant Watering System Project - - - - - - - - - - - - - - - August 2023 - December 2023*

- Lead an Arduino-based plant watering system, using the ATMEGA 2560 and employing interrupts, state machines and timers for efficient button handling and system control.
- Integration of moisture sensing, water level monitoring, and pump control for capturing accurate data and using LCD to display real time data.
- Resulted in system being able to pour 0.5 cups of water, measured plant moisture 95% accurately and repeated intended procedure every 6 hours (±10 minutes).

Software Engineer, *Scholarship Report Generator - August 2023 - December 2023*

- Developed a Scholarship Report Generator in Java to automate generating and emailing reports.
- Responsible for the implementation of comprehensive unit tests for Annual, Application, Disbursement, Matching, and Scholarship Reports varying in memory (up to 2.1 MB) and data in order to capture the systems behavior.
- Resulted in system passing 10 unit tests, met 98 system requirements and was able to generate and send reports within 6 seconds.

Electrical/Computer Engineer, *University Lab/Teaching Assistant - August 2023 - December 2023*

- Oversee a Verilog-based coding lab for a group of 20 undergraduate engineering students.
- Assist course professor in lecture with student inquiries and Exam proctoring
- Coordinate study sessions with students to practice and review course material

Software Engineer, *Snake Game Project - June 2023 - July 2023*

- Taught 25 students the fundamentals of python programming to develop Snake.
- Developed an Q - Learning algorithm for the snake to learn how to play the game and score high.
- Implemented a helper script that tracks the score and increases the snake's score after every game.

Software Engineer, *Sudoku Solver - June 2023 - July 2023*

- Taught 25 students the fundamentals of python programming to develop a Backtracking algorithm.
- Utilized Backtracking algorithm to develop an A.I. to solve any given Sudoku.
- Coded the user's option to manually solve Sudoku or allow for A.I. to solve Sudoku.

Electrical/Computer Engineer, *Elephant Food Pellet Project - September 2022 - December 2022*

- Collaborated with multidisciplinary engineers to develop a food pellet launcher for elephant's enclosure to encourage exercise.
- Developed a Python script that uses a touchscreen to initialize the launching sequence of the food launcher.
- Created a launcher that shoots a scattered projectile up to 120 feet.

Electrical Engineer, *Solar Tracker Project - August 2021 - December 2021*

- Used Arduino, solar panels, photoresistors and servo-motors to track the movement of the Sun.
- Implemented three axes of rotation to better capture light and produced 20 Volts after 30 minutes.
- Resulting final product inspired the course professor to implement this project into the future semesters.

Work Experience **Date**

OEBC Student Accounting Assistant, *University of Arizona - January 2023 - Current*

- Purchasing Card (P-Card) reconciling; collect documentation/receipts from PCard holders and assign appropriate account codes. Prepare online orders for office supplies and textbooks from vendors.
- Prepare travel authorizations and assist with travel expense reimbursement requests using University of Arizona policy guidelines. Prepare employee expense reimbursements when a purchase was made using their personal funds.
- Other duties assigned are scanning, acting as courier to bursar for cash receipts, etc.