Gustavo Moran Diaz

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Education

Stevens Institute of Technology **August 2021 – May 2025 (Expected)**
Bachelor of Engineering in Electrical Engineering, Minor in Pure & Applied Mathematics *Hoboken, NJ*
Cumulative GPA: 3.93/4.00
Dean's List: Aug. 2021 – Dec. 2023

Experience

Automation Engineer Intern **June 2023 – August 2023**
GlobalFoundries – Automated Materials Handling System Department *Malta, NY*

- Developed a system to remotely backup hard drives on critical lithography automation equipment responsible for transporting silicon wafers using FTP servers
- Developed a written procedure for creating hard drive backups and simplifying system architecture
- Demonstrated effectiveness of procedure through testing, downtime during emergency events reduced from hours to less than 15 minutes
- Collaborated with multiple departments in order to schedule tests on wafer handling systems
- Queried overhead track error database using SQL in order to locate potential faults in the track

Electrical and Computer Engineering Lab Monitor **Sep. 2021 – Present**
Stevens Institute of Technology *Hoboken, NJ*

- Work with professors, teacher's assistants, and students providing assistance upon request
- Maintain upkeep of computers and lab equipment including multimeters, oscilloscopes, and 3D printers
- Helped students with lab assignments in Microprocessor Systems class with AVR assembly, x86 Intel assembly, and C++

Projects

Interactive Spotify Button | *Python, AVR, Spotify API, Git* **January 2023**

- Developed an interactive button for Spotify powered by an AVR Microcontroller and a Python script
- Used the Spotify API to add currently playing songs into user's "Liked Songs" playlist upon use of the button
- Implemented feedback in the form of an LED light that indicates if the process was successful or if errors were encountered.
- Learned Git in order to document code that allows the button to function

Autonomous Robot | *C++, AVR, SolidWorks (CAD), IoT* **January 2022 – May 2022**

- Developed a robot alongside a group with the goal of traversing a small obstacle course to reach specified locations in an assigned order
- Used LiDAR technology in order to monitor location of robot with respect to the course
- Sent current location information to the robot using Wi-Fi in order to facilitate automatic course correction
- Wired robot under very tight size constraints
- Designed 3D printed enclosure in order to hold all components of the robot including an AVR microcontroller, motor controller, OLED screen, and ultrasonic sensors

Technical skills

Languages: C++, Python, SQL, x86 Assembly, HTML, JavaScript, CSS
Programs: Solidworks, Autodesk Inventor, AutoCAD, Git, MATLAB
Tools: 3D Printer, Oscilloscope, Multimeter, AVR Microcontrollers, ARM Microprocessors