

Joseph P. E. Gabel

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Objective

Add value, as an Intern, to a work effort or team, applying my knowledge in circuit technology, as well as signal and information processing, to innovate technologies in the electrical engineering field.

Education

Georgia Institute of Technology | Atlanta, GA

Bachelor of Science in Electrical and Electronics Engineering, Minor in Spanish

GPA 3.93

Expected graduation May 2025

Skills

Programming: C/C++, Python, MIPS Assembly, Java, VHDL, MATLAB, HTML, CSS

Platforms: Microsoft, OSX, Linux

Hardware: Arduino, Raspberry PI, Oscilloscope, FPGA's, PCB Fabrication (LPKF Protomat, Protolaser)

Software: Altium, Arduino IDE, Aurora Solar, Excel, Keil Studio IDE, Spotfire, VSC

Languages: English (Native), Spanish (Advanced)

Relevant Coursework: Digital Design, Circuit Analysis, Programming Hardware/Software Systems, Signals and Systems, Embedded Systems Design, Microelectronic Circuits, Digital Signal Processing

Experience

Texas Instruments, Dallas TX (Product Engineering Intern)

June 2023-August 2023

- Through in-depth analysis, test data extraction, and wafer map review; improved yield performance of products to ensure customer satisfaction, maintain low cost, and increase profit margins on analog chip devices.
- In an effort to determine the cause of edge loss on wafers; conducted component and layout analysis on a large number of devices in production. Worked with multiple modules to gather data and develop a plan of action. Presented findings and possible actions to multiple teams and upper management.

Brookhaven National Laboratory, Brookhaven NY (Mini Semester Program)

January 2023

- Explored the BNL campus and facilities learning about their fields of research and opportunities, met with BNL staff in seminars based around their research. Applying engineering concepts, culminating in a presentation in front of BNL staff.

Lewis Johs Avallone Aviles, Islandia NY (IT Intern)

June 2022-August 2022

- Created a web crawler using the Selenium extension for Python to find missing address data for over 15,000 records spanning in excess of 3000 clients. To notify the clients that they may have been compromised by a cyber-attack.

Projects

Intelligent Digital Communications (Whitespace Detection ML Subteam)

August 2023-Present

- Research group - focused on using Machine Learning, Digital Signal Processing, Embedded Systems, and Wireless Communications, to enhance spectrum utilization. Creating intelligent mechanisms for debugging and enhancing all types of wireless communications. Subteam focuses on using LSTM ML models to detect white noise in FFT's.

Mbed Quest Game

October 2023-December 2023

- Designed the Hardware and Software systems for a custom RPG in C using Keil Studio Online, created a hashtable, custom sprites, animations, quests, and other functionalities utilizing hardware components such as pushbuttons, speakers, LEDs, and navigation switches.

Leadership

Team Leader - District Solar Cup | Atlanta, GA

September 2021-May 2023

- Coordinated and assigned work with an interdisciplinary team, focused on creating a development plan detailing all codes and policies for a PV system in Columbus County, Ohio. As well as lead a Distribution Impact Summary for a PV and Floatovoltaics system in Lake Nona, Florida to determine the threshold of interconnection points and the need for energy storage systems and surge protection. Presented our work to the DOE and received an honorable mention.

Sustainability and Infrastructure Committee | Atlanta, GA

January 2022-May 2022

- Planned a campus wide Earth week, in collaboration with various sustainability organizations on campus, promoting campus recycling programs and raising awareness, hosted events in excess of 100 participants.