Joseph F. Gogan Jr.

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EDUCATION

M.S.: Electrical Engineering, University at Buffalo, State University of New York, May 2024 GPA: 3.8
B.S.: Electrical Engineering, University at Buffalo, State University of New York, May 2023 GPA: 3.5
Minor: Mathematics, University at Buffalo, State University of New York, May 2023
High School Diploma: Canisius High School, Buffalo, New York, May 2019 GPA: 3.7

SKILLS & TOOLS

Languages: C, C++, Java, Matlab, Perl, Python, VHDL**,** HTML, CSS, JavaScript
Tools: Excel, LTSpice, Multisim, Jupyter, Visual Studio, Code Composer, Epsilon, Xilinx, ADS

ENGINEERING PROJECTS

Wind Turbine Design Project: Fall 2019
- Performed 30+ tests of 6 unique designs to optimize power production from empirical data.

IEEE Battle-Bots Competition: Spring 2022
- Assisted building with workshop machinery, performing various modifications leading up to competition.
- Soldered and made other repairs during competition between rounds.

Non-Contact Frequency Detector: Spring 2023
- Designed and assembled original radar based frequency detector for group Senior Design Project.
- Coded Signal Processing methods of Demodulation, Filters, Windowing, and FFT, independently.

RELEVANT COURSES

Circuit Analysis + Electronic Devices and Circuits Lab: Fall 2020 + Fall 2021 + Spring 2022
- Learned fundamentals of circuit design and then experimented with lab equipment, building various circuits, like amplifiers.

Introduction to Programming: Spring 2021
- Practiced fundamentals of C/C++ and Matlab operations.

Signals and Systems + Communication Systems: Spring 2021+ Spring 2022
- Studied the concepts of digital signal processing with various filters and transmission methods.

Applied Electromagnetics: Fall 2021
- Learned applications of induced magnetic fields in more depth from Physics in addition to Smith charts.

Embedded Systems + HDL Based Digital Design: Spring 2022 + Fall 2022
- Utilized a Zyboard system through Xilinx interface to perform various C and VHDL focused projects.

Introduction to Digital Signal Processing: Spring 2021
- Discussed multiple techniques in DSP including little/big endian processing, filtering, and windowing.
- Researched applications of ORB in place of SIFT and SURF as image processing techniques.

RF/Microwave Circuits: Fall 2023
- Discussed in more depth RF technology and equations including antennas.
- Simulated solutions to problems with Keysight ADS software in lab section.

WORK EXPERIENCE

Engineering Intern, Vocal Technologies, Buffalo, NY: July 2022 – Present
- Produced various digital signal processing projects alone or in small teams, including filters, echo cancellation, psychoacoustics and voice quality enhancement.
- Completed projects operating C\C++ based source code, along with projects in VHDL and Matlab.

Dairy Customer Service, Wegmans Food Markets, Buffalo, NY: December 2019 – September 2022
- Led small team to maintain department, by assigning tasks and training new hires.
- Maintained product in multiple locations with organizational skills to store excess product.

INVOLVEMENT

Treasurer, SHPE Student Chapter, University at Buffalo, May 2022 - May 2023
- Assisted in reforming club with President after it went inactive for COVID.
- Hosted events for engagement and networking and lead workshops for machinery.

Treasurer, UBMusicians Club, University at Buffalo, January 2020 - May 2022
- Managed equipment and purchases while organizing sessions for members to play together.

Member, IEEE Student Chapter, University at Buffalo, August 2019 – May 2022
- Collaborated on research during Battle-Bots assembly and Micro-Mouse meetings.