Dillon Labonte

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EDUCATION

Southern New Hampshire University   Manchester, NH
Bachelor of Science, Dual Major in Electrical Engineering and Mathematics   Expected Graduation May 2026
GPA: 4.0

TECHNICAL SKILLS

• **Programming Languages:** C++, Python, LabVIEW, MATLAB
• **Analysis and design**: digital circuit design, electric circuit design, Multisim circuit simulations, signal analysis, Inventor (CAD), embedded system development (Arduino)
• **Other skills:** Electromagnetic theory and applications, Microsoft Office

PROJECT EXPERIENCE

Instrumentation and Measurements
• Collaborated on a 3 person team to build a climate monitoring system that measured climate variables such as temperature, humidity, UV intensity, and light intensity.
• Integrated Arduino microcontroller and various sensors to accurately collect and process climate data, allowing for real time data analysis.
• Developed and optimized software in LabVIEW and Arduino IDE to provide a graphical interface for climate data. This required the use of strong problem solving and analytical skills to debug software and the hardware connection between Arduino and LabVIEW. Successfully achieved a working prototype.

Digital Circuits
• Designed and simulated the data path for a simple dedicated microprocessor as part of an individual final project, showcasing my strong fundamental understanding of digital circuits.
• Implemented key digital circuit components such as multiplexers, registers, D flip-flops, and various other logic gates to create a functional and efficient microprocessor data path.
• Utilized Multisim software to simulate the digital circuit and verify that it worked as intended.

Signals and Systems
• Built and analyzed a resistor-capacitor (RC) circuit to analyze the system in terms of its Fourier Transform and frequency response. This was done using a breadboard with physical components, an oscilloscope to capture the input and output, and a function generator to produce a square wave input.
• Built a simulated circuit using the transfer function of the system using Python. Used numerical python (NumPy) to analyze the fast Fourier transform (FFT) of the input and output and compare to that of the physical circuit.
• Applied signal analysis techniques and gained valuable experience with lab instruments.

CAMPUS INVOLVEMENT

• **Vice president** of Pi Mu Epsilon math honor society, September 2024 - Present
• **Lead STEM tutor** for the Wolak Library Learning Center, August 2023 - Present
• **Math major ambassador**, organizing events for math majors and other math interested people, August 2024 - Present
• **NCAA Division II student-athlete**, men's cross country, train 20+ hours / 6 days a week year round, August 2022 - Present

WORK EXPERIENCE

TJN Construction - *General laborer*   May 2023 – January 2024
• responsibilities included daily morning meetings, general upkeep of residential construction site such as sweeping, mowing, simple construction tasks such as small concrete pours and installing door hardware, aiding subcontractors with their needs to complete tasks on time and ensure an efficient construction operation.
• learned the construction trade by actively engaging, asking questions and being curious of the work going on around me.