

Simon Bullock

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EDUCATION

Binghamton University, State University of New York, Thomas J. Watson College of Engineering and Applied Science
Bachelor of Science in Electrical Engineering | **Cumulative GPA:** 3.3/4.00 May 2024

Johns Hopkins University, Whiting School of Engineering
Masters of Science in Electrical and Computer Engineering May 2027

TECHNICAL SKILLS

Technical: Xpedition Designer, SolidWorks, LTspice, AutoCAD, Revit, Microstation, Magic Draw, Simulink, Excel, Visio, Microsoft Project, Google Workspace, Github, Visual Studio, Adobe Photoshop

Languages: MATLAB, C++, C, Arduino, Verilog, Python, Javascript

PROFESSIONAL EXPERIENCE

BAE Systems, Test Engineer | Endicott, NY July-2025-Present

- Designed a complete test stand in Xpedition Designer for a Large Military FADEC (Full Authority Digital Engine Control) unit, including full interconnect architecture, interface panel layout, and PCB design for pressure transducer testing.
- Engineered custom hardware designs and cable assemblies to integrate PCs, waveform generators, power supplies, Ethernet switches and the unit under test into a reliable, scalable test environment compliant with aerospace standards.
- Led full hardware integration from concept to deployment, including schematic documentation, part selection, procurement, assembly, and troubleshooting.

BAE Systems, Hardware Systems Engineer | Endicott, NY June 2024-July 2025

- Led signal integrity and electromagnetic interference (EMI) testing for the Boeing 777x actuator control electronics, proactively identifying and resolving issues to ensure compliance with rigorous industry standards and enhance system reliability.
- Developed and delivered clear technical documentation and design reports tailored for both engineering teams and external stakeholders, ensuring alignment, transparency, and smooth collaboration across project phases.
- Owned system configuration workflows using internal configuration management tools; investigated technical failures, engineered solutions, and deployed fixes to maintain system integrity and meet evolving project requirements.

Gannett Fleming, Electrical Engineering Intern | Manhattan, NY June-August 2023

- Executed load calculations and meticulously populated panel board schedules to ensure compliance with industry standards and safety regulations.
- Supported the development of essential design documents, including electrical floor plans, equipment schematic diagrams, electrical load calculations, short circuit studies, and protective device coordination studies.

PROJECT EXPERIENCE

Technical Development Curriculum, BAE Systems | Endicott, NY August 2024-May 2025

- Led the development of a proposal for an actuator control board capable of driving direct-drive and servo valve actuators; collaborated closely with senior BAE Systems engineers to scope the problem, translate mission needs into technical requirements, and design custom analog hardware. Delivered final architecture, supporting documentation, and technical presentation.

Senior Project: Wireless Shifting for Bikes, Configuration Manager | Binghamton, NY September 2023 - May 2024

- Designed and implemented a real-time speech processing and command execution system using Raspberry Pi and Arduino, collaborating with a multidisciplinary team to enable voice-controlled shifting and braking on a bike.
- Spearheaded the development and optimization of speech recognition and command processing software algorithms (Python on Raspberry Pi, C++ on Arduino), achieving rapid and accurate system responses.

Junior Design Final Project: Metal detector, Co-Engineer | Binghamton, NY April 2023 - May 2023

- Engineered an innovative metal detection system employing electromagnetic coupling, enhanced by a Basys 3 FPGA for real-time detection validation and tallying.
- Designed and implemented a 7.2V DC-powered Colpitts oscillator circuit, incorporating an inductance coil to enable metal detection functionality.

LEADERSHIP & INVOLVEMENT

Binghamton Bicycle Co-op, Co-Founder & Vice President | Binghamton, NY March 2020-May 2024

- Co-founded and led a student-run bike co-op, managing daily operations of a free, full-service repair shop open five days a week. Recruited and trained a team of 10 in bike mechanics and day-to-day shop operations, improving campus mobility infrastructure and advancing sustainability initiatives.