Fiona Rae

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Experience

Researcher, Cornell University Laboratory of Plasma Studies **August 2024-Present**

- Designed custom circuits to replace delay generators.
- Designing, calibrating, and fielding novel plasma diagnostic.

Systems Engineering Intern, Lockheed Martin **Summers 2023, 2024**

- Performed link budget analysis including path and coverage studies.
- Established and configured VLAN across multiple network devices.
- Prepared Maintenance Repair and Operation product documentation to be provided to the customer.
- Verified parts and requirements for multiple systems across the project both through a matrix cross checking between documents as well as through systems tests.
- Created and edited drawings and 3D models for systems and individual parts of the prototype.
- Created hardware parts, assembled, and built up the system, routed and terminated cables for a prototype.

Cornell Cup Robotics **2021-2022**

- Programmed Arduino using Python and Java to send commands and communicate with Jetson, servos, and steppers; and authored documentation detailing systems and process.

Hudson Political Studies Fellow **2022**

- Studied politics and philosophy including Machiavelli, Locke, and de Tocqueville; engaged with high profile experts on world affairs.
- Required strong leadership and communication abilities in both oral and written contexts.

Science and Engineering Apprenticeship Program, United States Navy **2021**

- Assisted cyber security team at Naval Surface Warfare Center of Philadelphia in virtualizing labs.

Education

Cornell University, Electrical and Computer Engineering Master of Engineering **2025**

Cornell University, Electrical and Computer Engineering Bachelor of Science **2021-May 2025**

Leadership Positions

Vice President of Finance of the Cornell Political Union, Secretary of the Network of Enlightened Women Cornell Chapter

Skills

Programming Languages: Linux, C, Verilog, Assembly, Java, Python, Arduino, JavaScript, Swift, LabVIEW.

Technical: Wiring robot controllers (Victor SPX, Talon SRX, Sparks, Spark Max, NEO Brushless Motor Controllers) and sensors (limit switches, color sensors, ultrasonic sensors), soldering.

Software: MSProject, Confluence, Jira, Word, Excel, PowerPoint, GoogleDrive, Eclipse, XCode, GitHub, Creo Parametric, AutoCAD, TAP7, Onshape.

Miscellaneous: Agile, Waterfall, Public Speaking.