

BEN BROWN

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SUMMARY

Passionately motivated engineer and researcher with 2+ years experience solving complex problems across diverse fields. Seeking full-time, cross-disciplinary work combining programming, engineering, and ethics in a research setting.
Available Immediately

EDUCATION

BS Electrical Engineering , Rochester Institute of Technology	Earned 2024
Applied Statistics Immersion , Rochester Institute of Technology	Earned 2024
GPA: 3.08	

SKILLS

Software	Python, Pytorch, TensorFlow, C/C++, Assembly (MSP430), Git tools, \LaTeX
Hardware	Verilog/VHDL, Embedded Systems, Electrical Lab Tools, Circuit Analysis (AC/DC)

EXPERIENCE

Research Assistant <i>Cybersecurity</i>	Aug 2023 - Dec 2023, May 2024-Present
DeFake Project	<i>Rochester, NY</i>

- Used PyTorch to write a modular, scalable framework for variable-scale analysis, with a publication target of a November 2024 conference.
- Wrote memory-efficient code extending Adversarial Robustness Toolbox to attack various models.
- Operated Ubuntu command line and VSCode to collect data and identified several vulnerabilities in common deepfake detection architectures.
- Participated in team reading groups about Artificial Intelligence and Cybersecurity.

Team Lead <i>Agriculture Technology</i>	August 2023 - May 2024
RIT Multidisciplinary Senior Design	<i>Rochester, NY</i>

- Prototyped support circuitry for Fabry-perot spectral sensor using LTspice simulations and schematic capture.
- Served as primary contact between customer and team by scheduling design reviews and sending weekly updates.
- Designed conference posters and drafted a detailed technical report using Microsoft Office.
- Showcased final results at Imagine RIT 2024 and CEIS Symposium

Electrical Intern <i>Defense</i>	Jan 2023 - Aug 2023
L3Harris Technologies	<i>Rochester, NY</i>

- Wrote Python to automate hardware checks of VHF radios, increasing testing efficiency by 57%.
- Communicated with embedded linux environment via serial port to log errors for more meaningful verification.
- Operated oscilloscopes, multimeters, and soldering to debug and repair failing units.

Electrical Intern (ML/AI) <i>Titanium Production</i>	Jan 2022 - Aug 2022
TIMET Morgantown	<i>Morgantown, PA</i>

- Used SQL database to analyze historical data and implement innovation to save the company seven figures annually.
- Deployed time series prediction technologies and python tools (NumPy, Pandas, Scikit-learn) to estimate chemical profile of furnace contents and ensure melt quality.
- Advocated for ethical implementation of technological tools to prevent reckless worker displacement.
- Designed custom genetic algorithm to optimize XGBoost hyperparameters in production use.