BEN BROWN

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OBJECTIVE

Passionately motivated engineer seeking full-time, fast-paced, cross-disciplinary work combining Electrical Engineering, Programming, 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, C/C++, Assembly (MSP430), MATLAB, PyTorch, JMP Pro 16, Java, LaTeX
Hardware	Electrical Lab Tools, Circuit Analysis (AC/DC), SMT/THT Soldering

EXPERIENCE

Research Assistant | *Cybersecurity*   Aug 2023 - Dec 2023, May 2024-Present
DeFake Project   *Rochester, NY*

- Wrote scalable, modular PyTorch framework for variable-scale testing of **DeepFake detection** algorithms to investigate the security of visual media
- **Collected data** on several adversarial attacks (within ART) for DeepFake detectors and generators to determine vulnerabilities in common deepfake detection architectures
- Participated in team reading groups about Artificial Intelligence and Cybersecurity

Electrical Intern | *Defense*   Jan 2023 - Aug 2023
L3Harris Technologies   *Rochester, NY*

- Produced largest **hardware prototyping** run seen by sector in record time in a non-production facility
- Wrote complete **Python test suite** to automate hardware checks of **VHF Radio**, increasing efficiency by 57%
- Wrote procedures, Python/C/C++, and reports for small scale testing
- Used **oscilloscopes, multimeters, and soldering** to debug and repair failing units

Electrical Intern (ML/AI) | *Titanium Production*   Jan 2022 - Aug 2022
TIMET Morgantown   *Morgantown, PA*

- Collaborated with several groups in producing technology that simultaneously simplifies operator's jobs, and potentially saves the company seven figures annually
- Employed several **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

PROJECTS

Engineering Capstone - Spectral Sensor Integration: Lead small, high performance team of students to design, manufacture, and produce a fast, high accuracy system for detecting light on the SWIR spectrum.

STAT 325 Final Project - Statistical Optimization of Neural Network Hyperparameters: Collaborated with small team to design, run, and analyze an experiment using DOE principles and JMP 16 statistical software.