

ISAIAH HARVILLE

DATA SCIENTIST

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github.com/IsaiahHarvi

ABOUT ME

Technical Skills	C/C++, Python, Git, PyTorch, Numpy, Matplotlib, Signal Processing, Artificial Intelligence, Machine Learning, Adversarial ML, Agile, Docker, SQL, Linux, SDR, RF, GNURadio, Regex
Security Clearance	U.S. Citizen / Top Secret (Interim)
Summary	Computer Scientist with a passion for theory; Experience in Software Engineering, AI/ML and Data Science. Highly proficient with Python and its scientific libraries. My combination of technical and research skills acquired over 3+ years, in addition to academic qualifications, demonstrates commitment and capability in the field.

EDUCATION

The University of Alabama in Huntsville, B.S.

(Fall 2022 – Fall 2024)

- Bachelor of Science in Computer Science
- President's List (Spring 2022)
- 3.6 GPA
- Dean's List (Fall 2023)

PROFESSIONAL EXPERIENCE

Trideum Corporation

Software Engineer Intern

Huntsville, AL (December 2023 – Present)

- Implemented Deep Learning techniques when creating custom Radio-Frequency Machine Learning Classifiers used to evaluate the effectiveness of Adversarial Attacks on simulated signals
- Conducted experiments in GNURadio, embedding ML models for modulation classification and perturbation
- Lead author of a forthcoming conference paper on the Transferability of Adversarial Machine Learning, focusing on Evasion Attacks on Analog signals over SDR from two unique RF testbeds
- Wrote signal modulation/demodulation library to generate simulated analog signals
- Configured GitLab CI/CD Pipelines integrated with nested Docker containers to ensure seamless development and deployment processes.
- Created a method for automated integration testing of docker containers, removing the need for manual implementation

UAH Center for Cybersecurity Research and Education

Research Assistant II

Huntsville, AL (February 2023 – January 2024)

- Lead a Signals Intelligence team tasked with processing and manipulating signals
- Demonstrated proficiency in developing cutting-edge malicious software solutions
- Spearheaded projects focusing on cybersecurity, including the creation of sophisticated tools for data interception on Wi-Fi networks
- Managed project planning and research process control to meet deliverables and provide substantial bi-weekly customer updates

Analytix

Software Engineer Intern

Huntsville, AL (May 2022 – March 2023)

- Wrote a containerized Microsoft Azure Python Django program to parse CSV radar data from a number of weapon systems and turn it into downloadable binary data
- Practiced a short-term Systems Engineering role, performing requirements analysis for a proposal
- Experience communicating with government customers to guarantee a correct software product
- Worked on several proposals in a research/development capacity

PERSONAL PROJECTS

Scratch - Neural Network

(June 2024)

- Multi-layer Perceptron created entirely from scratch utilizing only Numpy; viewable on GitHub
- Trained on the MNIST dataset with 91% accuracy
- Implements backpropagation, cross-entropy loss, and multiple activation functions

Now Dribble

(October 2023-Present)

- Contract work that I supported as an iOS Developer for my SaaS Partnership, P&H Neel Group
- Manage project, including the workflow, repository, requirements, etc.
- Written in Swift and utilizes REST API to communicate with the AWS hosted S3 Buckets and SQL databases
- Awarded follow-on contract for maintenance and enhancement