

# Jordan Stout

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## Education

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**Boston University** *M.S. in Statistical Practice, GPA 3.85* *Sept 2024-December 2025*

- *Coursework:* Statistical Machine Learning, Advanced Statistical Modeling, Data Science in R

**Wheaton College Massachusetts** *B.S. Physics and Computer Science, GPA 3.70* *Sept 2017-May 2021*

- *Coursework:* Methods of Scientific Computing, Parallel and Distributed Systems, Operating Systems

## Experience

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**Data Science Intern, *Fidelity Investments*** *September 2024-May 2025 — Boston, MA*

- Led a team of 10 interns in developing a multi-query RAG pipeline in Python and SQL, processing 10,000+ internal Fidelity technical documents
- Developed a Random Forest model to extract features of documents that optimize RAG performance allowing Fidelity to refine their knowledge base saving money in data storage and retrieval costs

**Software Engineer, *True Engineering*** *January 2024-September 2024 — Cambridge, MA*

- Developed Python scripts to automate translation of live-streamed naval data into JSON and proprietary formats, saving 100+ hours weekly.
- Collaborated with senior naval personnel at Point Loma Naval Base to debug and integrate TrueNumbers into operational data pipelines, while supporting and educating non-technical stakeholders on its UI and data model.

**Software Engineer, *Raytheon (DoD Secret Clearance)*** *June 2022-June 2023 — Cambridge, MA*

- Redesigned a multithreaded C2 architecture in C++ for a classified DARPA project, enhancing code robustness, maintainability, and clarity.
- Implemented real-time acoustic signal processing algorithms in C++, leveraging Fast Fourier Transform (FFT) techniques to extract and analyze frequency-domain features from raw sensor data.
- Maintained classified technical documentation in compliance with security protocols and procedural standards for government-contracted projects.

## Projects

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### Conversational Audio Analysis

- Echos is a platform that transcribes, summarizes, and analyzes live audio feed, featuring a RAG system that enables users to chat with their transcripts and receive context-aware answers.
- Tools Used: Python, FastAPI, LangChain, React, TypeScript, AWS

### PINN - Poisson

- Implemented a Physics-Informed Neural Network (PINN) in PyTorch to solve the 2D Poisson equation with zero-Dirichlet boundary conditions, training purely from PDE and boundary constraints.
- Tools Used: Python, PyTorch, NumPy, Matplotlib

### Dynamic Rhythms Machine Learning Challenge

- Engineered robust features and trained XGBoost and deep learning models to predict power outage occurrence, severity, lead time, and number of affected customers.
- Tools Used: Python, Jupyter, PyTorch, Scikit-learn, XGBoost

### Physics Constrained CNN

- PoissoNet is a physics-constrained U-Net that replaces the pressure Poisson solve in projection-based CFD, cutting inference time from minutes to milliseconds.
- Tools Used: CUDA, PyTorch, NumPy, SciPy, Matplotlib

## Technologies

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**Languages:** R, Python, C++, C, MATLAB, TypeScript, JavaScript, CSS, SQL

**Technologies:** React, Atlassian, Pinecone, AWS, PyTorch, Docker, Scikit-Learn, LaTeX, Linux