

# ETHAN WAXMAN

## EDUCATION

**Cornell University**, College of Engineering, Ithaca, NY

May 2024

Bachelor of Science, Double Major in Applied and Engineering Physics and Computer Science

GPA: 3.53; 4 Year Varsity Athlete; Eagle Scout

**Relevant Courses:** Foundations of AI, Computational Linguistics, Neural Networks, Compilers, Computer Architecture and Design, Operating Systems, Discrete Structures (Honors), Functional Programming

## RELEVANT EXPERIENCE

**FI Consulting** - Arlington, VA

*Software Developer*, Aug. 2024 - Present

- Deployed 3 graph neural network architectures for recommendation and churn prediction, overcoming data and scaling issues to train on 1M+ users in <5 min; proposed a new solution for personalized marketing at a large retail bank.
- Implemented a machine learning entity resolution service on AWS Sagemaker, removing over 10,000 duplicated records for a major financial institution.
- Built a customer analytics dashboard with PySpark and Databricks, enabling executives to query the behavior of over 15 million customers for actionable insights instantaneously.

*Intern*, Jun. 2023 - Jun. 2024

- Built a Retrieval-Augmented Generation (RAG) application to support internal document queries, integrating ChromaDB and Ollama; extended the system with Redis and Flask to support 50+ simultaneous users and service requests in under 10 seconds.
- Evaluated OCR services from AWS, Azure, and GCP on 5,000+ documents, documenting and comparing the offerings to support internal workflows.

**Amalgam Rx** - Baltimore, MD

*Intern*, Jun. 2021 - Aug. 2021

- Implemented an AI chatbot that supported medical professionals treating mental health problems.

## PROJECTS

**Compiler**

- Led a 3 person team to build a full-stack compiler for an academic programming language, comprising 10,000+ lines of Java.
- Introduced modular design patterns that maintained clarity and enabled rapid feature development.

**Large Language Model Research**

- Conducted novel research into LLM cognition linking the preferences of syntactic repair of garden path sentences in humans with the frequency of model predictions.
- Authored a 7 page research paper detailing motivations, methods, and findings.

## OTHER

**Skills:** Functional Programming (OCaml) | Natural Language Processing (NLTK) | Machine Learning (PyTorch, TensorFlow, Keras) | Backends (FastAPI, Redis) | GenAI (ChatGPT, Cursor) | ETL (Airflow)

**Certifications:** AWS Cloud Practitioner | Neo4j Graph Data Science

**Programming Languages:** Java (advanced) | Python (advanced) | OCaml (advanced) | Rust (intermediate)