

Josh Hemingson

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EDUCATION

University of Illinois Urbana-Champaign

GPA: 3.93/4.0

Bachelor of Science: Mathematics & Computer Science

Graduation: May 2026

- Relevant Coursework: Linear Algebra, Probability & Statistics, Data Structures & Algorithms, Differential Equations, Advanced Stochastic Processes, Real Analysis

EXPERIENCE

Quantitative Trading Team Member

Jan 2024 – Present

Quant @ Illinois

Urbana-Champaign, IL

- Implemented Python pandas library and TA-Lib library to preprocess 130,000+ lines of data, using the TA-Lib abstract API to evaluate 150+ technical indicators
- Developed a Binary and 4-class Classification XGBoost Machine Learning model achieving accuracy scores of 95.71% and 62.51% respectively
- Utilized Tuneta Library to finalize a high performing Random Forest Regressor Model, achieving a yearly return increase of 7.84% and a decrease in Maximum Drawdown by 14.43% through backtesting

Software Engineer Internship

June 2024 – Aug 2024

Rapidamic Lab

Silicon Valley, CA

- Spearheaded the complete redesign and development of the firm's website using React, TypeScript, and Tailwind CSS for 1,000+ global clients reducing server response time by 25%
- Engineered a dynamic web application leveraging Express framework and Node.js to collect survey data from clients stored using MySQL database
- Integrated the OpenAI API to process data and deliver results, achieving a client satisfaction score exceeding 90%

Theoretical CS Research Assistant

Jan 2024 – May 2024

CS Theory and Algorithms Research Department @ UIUC

Urbana-Champaign, IL

- Implemented the Coverage Function algorithm on a public goods allocation setting increasing optimization of Greedy algorithm measured by Nash Social Welfare
- Utilized Python Matplotlib and a FPTAS algorithm to implement the optimization setting, measuring an approximate 3x improvement in fairness over the AlgGreedy after testing with randomized datasets
- Applied extensive mathematical proofs in combinatorics and graph theory to support Python calculations

Junior Full Stack Developer Internship

June 2023 – Aug. 2023

Incedo Inc.

Florham Park, NJ

- Developed the website interface, avatar, and text blocks using React (HTML/CSS, JS) for an AI-powered digital assistant for Fortune 500 clients.
- Utilized Azure services on bot's backend development, leveraging Cognitive Search and several features to achieve a 98% search efficiency rate

LEADERSHIP / EXTRACURRICULAR

Board Member (Treasury) of URSA (Undergraduate Research for Scientific Advancement)

- Reviewing applicants' resumes and connecting eager undergraduates with engineering PhD candidates and professors for research opportunities while conducting periodic check-ins throughout semester
- Responsible for URSA funding by managing accounts and submitting funding requests to Engineering Council

Captain of UIUC Squash Club

- Team coach and first seed of UIUC squash club leading weekly practices, raising funding, and organizing monthly matches with competitor universities

TECHNICAL SKILLS

Languages: C++, Python, Java, JavaScript, HTML\CSS, C#

Developer Tools: Git, GitHub, Microsoft Azure, VS Code, IntelliJ, Android Studio, Jupyter Notebook

Libraries: Pandas, NumPy, Matplotlib, Scikit-learn, Ta-lib, TuneTA