

# ROSHNI GUHA

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## EDUCATION

**University of Wisconsin - Madison, WI, USA**

**September 2024 - Expected May 2028**

*Bachelor of Science in Computer Science (Honors) and Mathematics (Planned), Certificate in Business*

**Cumulative GPA:** 3.87/4.0 | Dean's List

**Relevant Coursework:** Object-Oriented Programming and Data Structures (Java), Artificial Intelligence, Matrix Methods in Machine Learning, Linear Algebra, Discrete Mathematics, Microeconomics, Engineering Statistics (R)

## PROFESSIONAL EXPERIENCE

**CapitalFund Investment Team**

**Hawk Center for Investment Analysis, UW Madison**

*Undergraduate Researcher - Quantitative Finance*

*September 2025 - Present*

- Developed quantitative strategies to manage a portfolio of \$1M+ as a part of a student-managed CapitalFund Investment Team using Interactive Brokers, Docker and automated trading tools.
- Built and refined the production tech stack and data flow, transforming Model State into Aggregate Optimized Positions for live portfolio execution. Developed model prototypes, including a momentum-based model for SPY with an MVO framework and a reinforcement learning model for global equities, as part of the team's systematic strategy research.

**Royal Bank of Canada Wealth Management**

**Madison, WI**

*Project Intern*

*September 2025 - Present*

- Developed an AI-driven equity research tool that integrates financial APIs (Yahoo Finance), sentiment feeds (Reddit, X), and financial news aggregators to automate equity research workflows for portfolio managers.
- Built a functional MVP in Python and Node.js that retrieves, summarizes, and visualizes multi-source insights (fundamentals, earnings surprises, sentiment, and technical indicators), reducing manual research time by over 50%.

**Department of Computer Sciences**

**University of Wisconsin-Madison, USA**

*Peer Mentor - Programming II*

*June 2025 - Present*

- Mentored 600+ students in object-oriented programming, data structures, recursion, and algorithm complexity during office hours and supported development of debugging skills during the development of complex weekly projects.
- Promoted after mentoring Programming I class over the summer, leading 4 labs and office hours for 45+ students with minimal programming experience in concepts such as control flow, data types, functions and debugging.

**Al Khayat Contracting LLC**

**Dubai, UAE**

*Summer Data Analyst Intern*

*July 2023 - July 2023*

- Assisted senior analysts in compiling and interpreting payment, working capital, and tender data, improving reporting workflows and reducing turnaround times by ~20%, supported by SQL knowledge gained through prior training.

## CERTIFICATION

**IIT Kanpur Machine Learning**

**August 2025**

- Designed, implemented, and evaluated supervised and unsupervised ML models in Python, including regression and clustering techniques. Applied model interpretability tools (SHAP, LIME) for and delivered end-to-end ML solutions.

## LEADERSHIP

**Cardinal Trading Group**

**Expected January 2026**

*Incoming Vice President of Software Development*

- Lead development and backtesting of quantitative trading strategies for the student-run trading organization
- Coordinate between software developers, market researchers, and the CS department as the CS-RSO representative

## PROJECTS

**UW Match**

**September 2025 - November 2025**

*Python, AI APIs, Svelte, FastAPI, MongoDB, Node.js (<https://www.uwmatch.com>)*

- Built course search platform with 350+ users featuring AI-generated summaries and analytics; led ML integration developing recommendation models based on user interests and course popularity for improved discovery

**Smoking Habit Predictor**

**August 2025**

*Python, Pandas, Matplotlib, Scikit-learn, Numpy ([Github](#))*

- Preprocessed health dataset including outlier detection and applied ML models to achieve ~76% accuracy with SVM using 10-fold cross validation; evaluated feature scaling and visualized correlations and model performance with Matplotlib.

## SKILLS

**Languages & Tools:** Python, Java, SQL, R, PyTorch, Numpy, Pandas, Matplotlib, Scikit-learn, Microsoft Office

**Concepts:** OOP, Data Structures, Financial Forecasting, Data Analysis, Backtesting, Optimization, Machine Learning