

RISHI GOTTIMUKKALA

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Education

North Carolina School of Science and Mathematics

Durham, NC

GPA: 4.93 / 5.00

2023 - Present

- **Relevant Coursework:** Linear Algebra, Graph Theory, Object-Oriented Design, and Mathematical Modeling
- **College Coursework:** Applied Physics, Modeling with Differential Equations, Dynamic Systems, Sociology, and Management Studies

Experience

[REDACTED]

[REDACTED]

2023 - Present

Wealthy Waters

Founder

2023 - Present

- Non-profit focused on enhancing youth financial literacy through education, workshops, and fintech partnerships
- Weekly newsletter with 6,500+ subscribers and 70+ posts, thereby building a community around financial literacy and world economic news. Initiated NC middle school course, 'Investing and Financial Literacy,' with supporting material
- Presented cause at IEEE-USA webinar to encourage research in youth financial literacy efforts

IEEEXtreme

Ambassador

2024 - Present

- 1 of 6 ambassadors in USA, representing the Southeastern region in IEEEXtreme global competition
- Organized outreach campaigns across regional IEEE chapters and networked with faculty and student leaders to encourage participation. 50% increase year-over-year participation

Academic Works

Efficient Knowledge Feeding to Language Models

Second Author

2023 - Present

- Incorporated In-Context Vectors (ICV) to combat issues with existing RAG models and token limitations. Developed novel encoder-decoder architecture with latent embedding and tested against existing foundational models
- Improved efficiency and accuracy, outperforming standard retrieval and fine-tuning methods while significantly reducing computational costs and memory usage
- Pending publication in ACM TIST journal; Citescore: 14

Predictive Analysis of Cryptocurrency Market Trends Using Genetic Algorithms

First Author - University of Manitoba

2022 - 2024

- Developed a predictive model using Particle Swarm Optimization (PSO) to analyze behavioral economics' impact on cryptocurrency market trends
- Research centered around retail investors, with findings on information spread and herd mentality within new markets
- Oral Presentation at IEEE Conference for Financial Engineering and Economics

Honors

5x AIME Qualifier

USACO Platinum Division

2x President's Volunteer Service Award Gold

DECA International 5th Place (IBP)

Conrad Global Innovation Challenge: Top 6 out of 600+ teams

Skills/Interests

Languages: English (fluent) | Telugu (fluent) | Spanish (proficient)

Computer: Python | Java | Pandas | NumPy | TensorFlow | MATLAB

Interests: Applied Math Modeling | Computational Science | Fintech | AI