

# RISHI GOTTIMUKKALA

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## Education

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### 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

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### Accelno

Co-founder

2023 - Present

- Started a fintech company automating financial modeling with AI; platform scrapes data and builds financial models in seconds rather than hours
- Integrated research platform with chatbot interactions on 10-K reports and filtered market data
- Beta-testing with two firms and reached the Y Combinator interview stage

### 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

### IEEEExtreme

Ambassador

2024 - Present

- 1 of 6 ambassadors in USA, representing the Southeastern region in IEEEExtreme 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

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### 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

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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

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

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

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