Viresh Mittal

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EDUCATION

The University of Chicago — Chicago, IL
BS in Computer Science, BA in Economics — Expected, June 2026

- GPA: 3.98/4.00; Relevant courses: Systems Programming, Introduction to Probability, Linear Algebra, Calculus III
- Programs: Financial Markets Program, a specialized Booth School of Business program developing skills for quantitative finance; Prototype for Success, a selective career cohort growing technology and entrepreneurship skills

EXPERIENCE

Icosa Computing — New York, NY
Technical Intern — June 2024 – Present

- Using FastAPI in Python and AWS EC2 to create a RESTful API for an in-house quadratic unconstrained binary optimization library to streamline algorithmic portfolio development for quantitative trading partners
- Expanding existing backtesting codebase to work in parallel using AWS Fargate to speed up hyperparameter tuning by over 10x to facilitate intraday hyperparameter tuning on trading algorithms

The University of Chicago Voltage Research Program — Chicago, IL
Research Assistant — January 2024 – Present

- Assisting Professor John List and his team in economic field experiments by cleaning and pre-processing experimental data, building competency in data analysis, research techniques, and computational tools such as Python and Excel
- Conducted a comprehensive literature review, surveying papers on opportunity cost in the context of decision-making

De Nora Tech, LLC — Concord, OH
Operations Intern — June 2023 – September 2023

- Independently developed a GPT-powered, retrieval augmented generative AI solution via Python and Microsoft Azure for document analysis and QA currently used by a 9-person pilot team at 6x lower cost than commercially available alternatives
- Used Microsoft Azure, GitHub Actions, Docker, and Python's LangChain LLM library to implement solution

Peppertree Capital Management, Inc. — Chagrin Falls, OH
Finance Intern — May 2023

- Modeled assets using DCF in Excel to determine private equity strategy, and assisted with investor/portfolio meetings
- Utilized VBA to refine current program that uses FCC and proprietary data to continuously update a Google Earth overlay of all antenna structures in the United States that is used by the entire firm when evaluating potential telecom assets

Case Western Reserve University — Cleveland, OH
Summer Research Assistant — June 2022 – Aug 2022

- Worked under Professor Ya-Ting Liao in the Computational Fire Dynamics Laboratory to develop a ML model using PyTorch and Keras to predict pyrolysis of NOMEX fibers for future use to develop more robust fire-retardant fibers
- Presented at the 2022 John Glenn Memorial Symposium Student Poster Contest and won division

LEADERSHIP & ACTIVITIES

Algo Group — Chicago, IL
Board Member — October 2023 – Present

- Worked in a selective cohort to understand data structures and key algorithms through lectures and practice problems
- Currently leading future cohorts as part of the leadership board after exemplary engagement as a cohort member

Derivatives Group Quant Trading — Chicago, IL
Curriculum Associate — October 2023 – Present

- Participated in an 8-week quantitative finance education program covering financial derivatives and probability/statistics
- Developing content for new member education series after being selected as an associate for curriculum development

University of Chicago Institute of Politics, TechTeam — Chicago, IL
Developer — January 2024 – Present

- Developing software solutions for nonprofits; past work includes a parallel web-scraping solution to gather and store open-source intelligence for the Anti-Human Trafficking Intelligence Initiative using Python, SQL, BeautifulSoup, and aysncio

TECHNICAL PROJECTS

Hoops Head2Head Online Game — June 2024 – Present

- Building a game where 2 players try to connect 2 NBA players through mutual teammates in as few players as possible
- Developing frontend in React/JavaScript that calls Python backend with player data hosted in a Neo4j AuraDB database
- Technologies: Python, React.js, JavaScript, Google Cloud Platform, Neo4j AuraDB

UChicago Uncommon Hacks Hackathon Prize Winner — March 2024

- Worked in a team to develop a website calculating net carbon emissions between two points using the Google Maps API and a given vehicle profile pulled from a MongoDB database, giving suggestions on ways to reduce carbon footprint
- Technologies: Python, Google Maps API, MongoDB, Streamlit, HTML, BeautifulSoup

SKILLS

Programming Languages: Python, Java, C/C++, R, JavaScript, SQL, HTML/CSS, LaTeX, VBA
Technologies: Git, React.js, AWS, Microsoft Azure, Google Cloud Platform, Android Studio, Pandas, NumPy, FastAPI, MongoDB, Docker, LangChain, GitHub Actions
Languages: English, Hindi, Spanish