Taha Shaikh

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EDUCATION

Virginia Polytechnic Institute and State University (Virginia Tech)   **Blacksburg, VA**
Primary Major: Candidate for Bachelor of Science in Computer Engineering   *May 2023*
Secondary Major: Candidate for Bachelor of Science in Mathematics

Cumulative GPA: 3.50 / 4.00, Dean's List (all semesters), Calhoun Discovery Program Scholar (full merit scholarship)

SKILLS AND CERTIFICATIONS

- Programming: Wolfram Mathematica, C++, jQuery, LaTeX, Python, JavaScript, SQL
- Software: OpenAI Gym, Linux Multimedia Studio, GNU Image Manipulation Program, Intel ModelSim

EXPERIENCE

Commodity Investing by Students (COINS)   **Blacksburg, Virginia**
Junior Analyst   *September 2021 – Present*

- Assist in investing up to $1M on behalf of the Virginia Tech Foundation for the nation's only student-run commodity trading group diversified in futures-based ETFs and ETNs
- Made buy and sell trade recommendations using strong technical and fundamental analysis, regression analysis, and critical thinking skills garnered during targeted training and real-world trading experience
- Exported statistical analyses of time-series commodity futures data to interactive web platform for trade recommendations

MITRE Corporation   **McLean, Virginia**
Intelligence, Surveillance, & Reconnaissance Cloud Engineer Intern   *May 2021 – August 2021*

- Developed a decentralized data storage and cloud computing service for the National Geospatial-Intelligence Agency (NGA) using an Ethereum blockchain network hosted on Amazon Web Services outposts
- Presented project idea to NGA and Department of Defense department heads for use in international mission operations

Ithena   **Innsbrook, Virginia**
Data Engineering Intern   *May 2020 – August 2020*

- Analyzed thermal camera data to prevent the spread of COVID-19 in an office setting and created visualizations for contact tracing
- Developed communication protocols for IoT devices using MQTT, an IoT messaging standard

RESEARCH

Hume Center Workforce Development Program   **Blacksburg, Virginia**
Research Intern   *September 2020 – May 2021*

- Collaborated with MITRE and the Hume Center at Virginia Tech to create multi-agent simulations using reinforcement learning in order to demonstrate proof of emergent behavior in semi-autonomous agents
- Presented final paper "Emergent Phenomena in Multi-Agent Systems for Maritime Remote Sensing" at National Security and Defense Colloquium in Arlington, VA

PROJECTS

IoT Smart Warehouses   **Blacksburg, Virginia**
Engineering Design Lead   *January 2021 – May 2021*

- Created an algorithm to optimize warehouse truck to dock selection based on machine learning and image classification
- Presented concept and prototype to industry professionals from Boeing and General Engineering on behalf of Calhoun Discovery Program

Learner Vectors and Transition Matrices for Point of Need Learning   **Blacksburg, Virginia**
Technical Design Head   *Aug 2021 – current*

- Formulated application providing targeted reskilling and development paths for disadvantaged workers
- Currently working alongside Boeing's skill acquisition department to equip workers in the Northern Virginia area for success in Boeing's cybersecurity division

HONORS AND AWARDS

- Calhoun Discovery Program (full merit scholarship + $10,000 experiential learning grant)
- International Finalist in COMAP Mathematical Contest in Modeling (top 1.5% of teams globally)
- Exhibition in International Bridges Math-Art Conference
- National Piano Guild Advanced Bach Award (of 16 nationally)