MOHAMMAD ISLAM

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EDUCATION

Cornell University, College of Engineering   **Expected May 2025**
B.S. Computer Science, Operations Research and Information Engineering
Relevant Coursework: Data Structures, Machine Learning, AI Practicum, Computer Systems, Functional Programming, Object Oriented Programming, Optimization, Practical Data Science and ML, Computing with Python

SKILLS

Languages	Java, Python, JavaScript, TypeScript, OCaml, C, HTML/CSS, SQL, Swift iOS
Technologies	React.js, Node.js, AngularJS, MongoDB, AWS EC2, MySQL, Tableau, Unix, Git, Bash, PyTorch

PROFESSIONAL EXPERIENCE

Machine Learning Researcher   Apr 2023 - Present
Cornell Tech   *New York, NY*

- Curated a robust dataset by scraping carbon emission and feature data for **130+ Apple products** spanning a 5 year period from credible web sources in preparation for machine learning research.
- Enhanced and expanded on the architectural carbon model proposed by Udit Gupta, utilizing PyTorch to develop an optimized linear regression model using stochastic gradient descent, analyzing weights, p-values, and residuals in Apple production footprints.
- Collaborated with the S4AI Lab Group of **8 researchers**, fine-tuning the model to increase its accuracy, documenting the process, and communicating methods to facilitate data-driven sustainable product designs.

Software Engineer Intern   May 2023 - Aug 2023
Berkeley Pharma Tech   *Remote*

- Leveraged HTML/CSS in resolving and debugging critical website bugs, resulting in an **80% reduction** in user-reported issues and enhancing overall application performance.
- Designed front-end of third party project site using React Native with a partner, successfully integrating Metamask into the web3 application using hardhat node, leading to a **150% increase** in user adoption to facilitate secure cryptocurrency transaction functionality.
- Administered royalty redirection system for NFT trades, generating incoming **$150K+ revenue** and 10% royalties, contributing to substantial business growth.

Software Engineer   Feb 2023 - Apr 2023
BlackWallet   *Remote*

- Orchestrated HubSpot to intricately design email campaigns, harnessing customer cookies for pinpointed outreach, resulting in a **200% surge in client engagement** and a 15% augmentation of the mailing list.
- Applied AngularJS proficiency to rectify frontend bugs and refine the UI for a **50% improved overall design**.
- Teamed up with cross-functional units in meetings, showcasing teamwork and communication skills while advancing the company's search engine ranking.

PROJECTS

J.A.M.E. Street Built a high-performance brokerage simulation application using over 2000 lines of OCaml and Unix shell scripting. Integrated polygon.io API to ensure accurate real-time stock and options data, resulting in a 99% data accuracy rate and enhancing the realism of the simulation with under **200ms response time**.

Breaking 8.91% Developed robust Python program leveraging NumPy, PyTorch, Pandas, and Matplotlib to quantitatively analyze stock data from MongoDB. Explores random ticker investments in comparison to S&P500 benchmark.

74% Profitable Trading Algorithm Implemented an automated trading algorithm utilizing PineScript, resulting in 74% profitability margins. Executed risk management and adaptive strategies for **$25,000 or 400%** in dynamic portfolio gains.