

Faiyaz Hasan

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EDUCATION:

University of Pennsylvania, Philadelphia, Pennsylvania; **B.S.** Computer Science

Awards/Honors: A. James Clark Scholar; Cooke College Scholar (2023); New York State Scholarship for Academic Excellence (2023); National AP Scholar with Distinction (2022)

Programming Languages/Skills: Advanced Proficiency in Python, Java; Intermediate Proficiency in Swift, C, JavaScript, R; Beginner Proficiency in C++, OCaml, JASP, Tableau, AWS

Relevant Courses: Data Structures & Algorithms; Automata, Computability, and Complexity; Computer Systems; iOS Programming; IT Infrastructure/Big Data Analytics; Probability

INTERNSHIP EXPERIENCE

Boulevard Legacy LLC, Software Developer, *Philadelphia, PA*

Jan 2025 - Present

- Designed and built responsive, user-friendly frontend components using Swift for the iOS app “Pillar - Become Unstoppable,” enabling users to easily organize tasks, set personal goals, and track progress toward self-betterment
- Contributed to a 15% increase in feature engagement during beta testing and 1,000+ downloads on the App Store

Oncore, Software Engineering Intern, *Philadelphia, PA*

Jun 2024 - Jul 2024

- Developed secure authentication systems with Auth0, React JS, HTML, CSS, and integrating Epic and Cerner, which cut login times by 25% and boosted data security by 30%, minimizing unauthorized access attempts
- Contributed to full-stack development and MongoDB optimization containing patient, nurse, and health administrative data for Oncore, an AI-enabled workflow automation platform aimed at reducing the administrative burden in oncology care coordination

Fitalyst, Software Developer, *Philadelphia, PA*

Mar 2024 - June 2024

- Utilized React JS, HTML, and CSS in order to develop the frontend for Dash, a browser extension built to promote self-regulation to help students prioritize the most urgent and important tasks
- Recorded 85% of users reporting improved productivity and focus and a 20% rise in daily active users

RESEARCH & PROJECTS

Reinforcement Learning for Autonomous Trajectory Optimization

Nov 2024 - Dec 2024

- Trained reinforcement learning models using Actor-Critic methods to optimize autonomous vehicle trajectory control using Python, achieving smooth navigation along a reference track with a 95% success rate
- Utilized neural networks with 4 hidden layers (128 neurons each) and trained on 20,000 episodes, incorporating a reward system that penalized deviations from the track and excessive accelerations, ensuring stable and efficient movement

Alternative Protein Project

Sept 2024 - Present

- Developed an open-access machine learning platform to simulate lab-grown meat using over 50,000 transcriptomics and metabolomics data points from RNA sequence analysis

American Rescue Plan and the Effects of Stimulus Checks

Jun 2021 - Apr 2022

- Published and co-wrote a 22-page thesis on the effects of the American Rescue Plan in New York City on SSRN
- Utilized R, JASP, and Tableau data analytical software to interpret self-collected data (fieldwork & online survey)
- Created linear regression and ANOVA models to display the disproportionate allocation of resources and opportunities for minorities at the height of the pandemic

Machine Learning Applications for Predictive Analytics and Classification (Python)

Jun 2021 - Apr 2022

- Determined user's purchasing intent by utilizing nearest neighbor classifier on 12,000 user sessions to achieve a 95% accuracy
- Built a neural network, using Tensorflow, with an accuracy of 98% to classify road signs
- Developed a question answering algorithm using natural language processing concepts (td-idf) to rank documents

LEADERSHIP EXPERIENCE

Product Space @ Penn, VP of Fellowship, *University of Pennsylvania*

September 2024 - Present

- Led fellowship initiatives, teaching product management principles and methodologies to a group of 10 aspiring product managers while contributing to consulting projects for real-world client engagement

PennApps, Hackathon Organizer & Frontend Developer, *University of Pennsylvania*

Feb 2024 - Present

- Organized an annual hackathon to host the collaboration of over 500 new and experienced undergraduate hackers