

EDUCATION & CERTIFICATIONS

Major: Computer Science , Rutgers University, New Brunswick, NJ Expected Graduation — **May 2025**
Relevant Coursework: Principles of Info and Data Management, Data Structures, Discrete Mathematics, Systems Programming, Computer Architecture, Operating Systems and Design, Machine Learning Principles, Linear Optimization, Intro to Artificial Intelligence, Design and Analysis of Computer Algorithms, Probability and Statistics

Certifications: Software Design — Data Science Fundamentals — PowerBI Desktop
Currently Pursuing: AWS Cloud Practitioner

TECHNICAL EXPERIENCE

Software Engineer Mar 2025 — May 2025
CollabLab Remote (Contract)

- Designing and implementing backend features for CollabLab 2.0 and 3.0 using Node.js and real time communication technologies like Socket.io for a virtual classroom and remote collaboration platform.
- Implementing secure user authentication, subscription billing systems, and cloud IDE integrations.
- Collaborating closely with cross functional teams, actively participating in agile stand ups and syncs to deliver reliable and scalable backend systems.

QA IRM Developer Intern May 2024 — Sep 2024
Regeneron Pharmaceuticals East Greenbush, NY

- Developed applications using Microsoft Power Automate, JSON, Power BI, SharePoint, SQL, and PowerApps for cross departmental use; worked with the Software Developers and Automation Engineers to maintain these tools post-internship.
- Created and launched a SharePoint site to streamline department requests, handling over 1000 unique submissions in its first week, Increasing efficiency by 27%; received a superlative award from FTEs and a program extension for my contributions.

PROJECTS

Custom Neural Network Model Generator Web Application Flask, PyTorch, React.js, Docker, TensorFlow | Nov 2024 — Present

- Built a full stack machine learning application for training, testing, and exporting custom image classification models.
- Initially developed as a machine learning class assignment to recreate the LeNet-5 architecture using Python and select libraries. After the assignment, I independently enhanced model flexibility with techniques like batch normalization, dropout, data augmentation, and customizable optimizers to improve generalization and support more diverse datasets.
- Designed a seamless communication pipeline between a React front end and a Flask back end, enabling real time model configuration, training progress updates (dynamic loading bar), and efficient data exchange for testing and exporting models.

Crime Catcher AI Security System (Team Hackathon) Tkinter, Flask, OpenCV, Vue.js, SQLite, PyTorch | Nov 2024

- Developed an AI powered security system that monitors data feeds to detect weapons using machine learning models like YOLO.
- Implemented motion detection to optimize resource usage, ensuring processing only occurs when movement is detected.
- Integrated real-time alerts via email for weapon detection by setting up automatic recording when motion/dangerous objects were detected and emailing recordings to clients.

Price Tracker Web Extension React.js, Puppeteer, Node.js, JSON, HTML/CSS, REST API | Oct 2023 — Nov 2024

- Developed a web extension allowing users to track product prices and receive alerts for price drops.
- Built the frontend using React for the front end, while utilizing Puppeteer on the backend for automated price scraping. Also implemented a Node server that handled requests for price checks and sends updates to the front end.

EXTRACURRICULAR/LEADERSHIP ROLES

Secretary (Executive Board), Pakistani Student Association Sep 2022 — Present

- Organized events, managed communications, and developed an NFC based attendance system for the Pakistani student community at Rutgers.

Collegiate Powerlifter, Rutgers University Sep 2023 — Present

- Participated in and organized several powerlifting competitions, earning 6th place in the East Coast for the 67.5kg weight class (December 2024) at Collegiate Championships and qualified for Collegiate Nationals.

Server/Key Employee , PJ's Pancake House Jun 2020 — Aug 2022

- Earned key employee responsibilities, including opening and closing the restaurant, ensuring smooth operations, and managing cash handling procedures. Began as a busser/dishwasher and was promoted to server within 2 months.

SKILLS

Programming Languages	JavaScript, Python, Java, C#, C/C++, SQL, HTML, CSS, XML, JSON, Microsoft Power Query, LaTeX
Frameworks & Libraries	Node.js, Vue.js, React.js, Express, Flask, .NET, WordPress, Socket.IO, OpenCV, PyTorch, Tkinter
Development Tools	Git, MongoDB, PostgreSQL, MS SQL Server, Power BI, Power Automate, Power Apps, SharePoint