

Rishi Patel

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Available: Summer & Fall 2025

EDUCATION

Northeastern University, Boston, MA

MS in Computer Science Align

Relevant Coursework: Computer Systems, Algorithms, Object-Oriented Design,
Database Management Systems, Scalable Distributed Systems, Foundations of AI,
Machine Learning, Computer Vision

Sep 2023 – Present
Expected Graduation: May 2026

Aug 2019 – May 2023

Seton Hall University, Orange, NJ

BS in Biology

Relevant Coursework: Intro to Program Design, Discrete Math

TECHNICAL KNOWLEDGE

Languages: Python, Java, C, C++, R

Tools & Frameworks: Git, NumPy, Pytorch, Scikit-learn, Pandas

Databases: MySQL, SQLite, PostgreSQL

PROJECTS

Valor AI: An AI-Driven Platform for Streamlining VA Claims

Sep 2024 – Nov 2024

- Built a GPT-4-powered platform using Retrieval-Augmented Generation (RAG) to provide personalized claim guidance
- Developed an OCR parser with DistilBERT embeddings for VA form data extraction and structured storage
- Engineered a backend with Pinecone (vector search) and PostgreSQL for efficient query handling
- Delivered a secure, real-time chatbot interface with Next.js and TypeScript, streamlining veteran support

Fashion-MNIST Classification with PyTorch

Oct 2024 – Nov 2024

- Trained Feedforward and Convolutional Neural Networks on 60,000 Fashion-MNIST images, achieving 90%+ accuracy
- Optimized hyperparameters (layers, neurons, kernels) and implemented ReLU activation with dropout
- Visualized kernels using Matplotlib and extracted features to interpret model performance
- Analyzed training loss trends and misclassified examples to refine model accuracy

Object Recognition System in C++

Feb 2025 - Present

- Developed a real-time object recognition system in C++ using OpenCV, detecting and classifying objects based on 2D shape
- Implemented image thresholding, morphological filtering, and connected components analysis to isolate and extract objects
- Built a feature extraction and classification pipeline, leveraging shape-based descriptors for robust object identification

Bird Strike Data Analysis (R & MySQL)

June 2024 - July 2024

- Utilized FAA's wildlife strike database to analyze 25,000+ aviation incidents across 15 attributes
- Designed a relational database on Amazon RDS (MySQL) for structured data storage and efficient retrieval
- Optimized SQL queries and performed statistical analysis in R to uncover trends in bird strikes and aircraft damage

WORK EXPERIENCE

Beskar Inc, New Brunswick, NJ

Business Partner/ Owner

Aug 2021 – Sep 2022

- Managed cryptocurrency mining operations utilizing 10 NVIDIA RTX 3090 GPUs, generating \$40,000+ in revenue
- Implemented RDP through VPN to enable secure remote access to machines, improving workflow efficiency
- Developed revenue projections and maintained over \$20,000 worth of mining equipment, ensuring operational reliability
- Optimized GPU performance through tuning, troubleshooting, and replacing thermal pads, reducing overheating issues, downtime, and maximizing mining efficiency

Ramdoot Inc (Deep Liquor), Castro Valley, CA

Manager/ Cashier

Mar 2020 – Sep 2023

- Collaborated with a team of three to build two liquor stores from the ground up, participating in all phases from initial setup to completion
- Set up and managed store technology infrastructure, including POS systems, surveillance cameras, and computer networks