

RUSHIKESH DESAI

Data Structure | Machine Learning | Quant Developer

☎ (862)215-0894 ✉ rrd7@njit.edu  [in/rushikesh-desai](https://in.linkedin.com/in/rushikesh-desai)  [github/Revilush](https://github.com/Revilush)  web.njit.edu/~rrd7

EDUCATION

M. S., Computer Science, New Jersey Institute of Technology, Newark, NJ

Sept 2023– May 2025

Coursework: Cognitive computing, Financial analysis & Modeling, Machine learning, Deep learning, Investment Management, Applied statistics.

Bachelor of Technology, Computer Engineering, D.K.T.E Engineering Institute, India

Aug 2016 – July 2020

Coursework: Data Structures and Algorithms, Database Management Systems, Automata Theory, System Programming, Machine Learning, AI & Deep learning, Cloud Computing.

SKILLS SUMMARY

Programming Languages: Python, C++, Java, C#

Databases: SQL, MSQl, MongoDB, PostgreSQL, Neo4j

Development Tech: React, Node, JavaScript, Express, Apache Kafka,

Data Science: Scikit-learn, NLTK, Numpy, Pandas, NLP, OpenCV, TensorFlow, CNNs, RNNs. Transformers, LLMs,

Tools & Frameworks: AWS, Kubernetes, Docker, Elasticsearch, Git, anaconda, Django, Tableau, ANTLR

Finance: Portfolio Analysis, Financial Modeling, Investment Management, Bloomberg certifications (BMC, BFF)

Other Skills: System Design, Linear Algebra, Statistics, Calculus, Algorithm Optimization

EXPERIENCE

Research Assistant, Martin Tuchman School of Management, NJIT, NJ

Sept 2024 – current

- As RA, conducting research on portfolio generation techniques, exploring reinforcement learning for dynamic asset allocation and using attention-based models to understand complex relationships between assets for optimal portfolio management.

Data Analyst, (Admission office), NJIT, NJ

May 2024 – current

- Analyzed application data, developed predictive models for volume, yield, and demographics, and provided insights to optimize admissions, recruitment, and financial aid strategies.
- Built data pipelines to streamline analysis and deliver insights to directors, for strategic decision-making. (ETL, data modeling)

Data Scientist, Flairminds Software, India

Oct 2022 – June 2023

- Developed and deployed product-matching system for e-commerce, with NLP, BERT for text analysis and computer vision models (VGG, Inception, ResNet, YOLO-NAS) for image comparison, improving product categorization and search relevance.
- Developed ML-driven document parsing system to extract, store, and retrieve data in Elasticsearch, delivering query-based results to improve search efficiency, and deployed it on AWS with React web app interface.

Full-stack developer, E-venu Computers, India

Sept 2021 – Aug 2022

- Spearheaded development of Product supply chain system, like integrating recommendation algorithms for target customer segments, predict sales across regions, and enhance inventory management efficiency.
- Implemented Optimizing techniques such as web speed optimization, compression using GZIP, caching along with MongoDB database optimization by data modeling & sizing memory (program optimization).

Software Developer, Rheal Software, Mumbai, India

Nov 2020 – July 2021

- Developed Judicial web Systems for U.S. counties, enabling case document submissions, reviews, notarization, judge decisions, and warrant generation, requests and approvals, including video call integration for judges and police officers.
- Designed and implemented Healthcare Management System for insurance processing, alongside client-specific, upgrade customizations for full-stack web applications using C#, ASP .NET, JavaScript, jQuery, XML, SQL, and MVC framework.

PROJECTS

- Developed a compiler using ANTLR to run QL (Quadratic Language) expressions and visualize in R:
- Build Generative AI model from scratch to convert text into music, producing around 50 unique music tracks using GANs:
- Developed deep CNN model for text-to-image generation, got 30% boost in image realism:
- Portfolio Optimization using Bloomberg real-time Data with Machine Learning with WCA (Wavelet coherence analysis):
- Alexa Enabled Voice Controlled Device for Car:
- Developed and deployed Online Toll Collection system using Image processing, reducing labor intervention by 76%.
- Completed Ant-Bot project (IIT Bombay E-Yantra Challenge), automating Ant-Bot navigation for real-time map:
- Developed AI powered gameplay with reinforcement learning. Tuned hyperparameter to optimal scale:
Demo: youtube.com/channel/UCJjdWyLtrw7R20EbQ_Wts1A
- Built end to end full-stack Banking Website with real-time processing and handling 500+ transactions/second:

EXTRA-CURRICULUMS

- Internship (Developer), COEP:** Developed recommendation systems (collaborative filtering, content-based) and news classification model, popularity prediction models with regression, TF-IDF, TextRank, and OCR for text extraction and processing. **May-July 2018**
- Hackathons Winner: National Hackathon**(Nov 2017), And **MLH HackNJIT 2023** (<https://devpost.com/rrd7>)
- Member: Data science club & NJIT Investment club (currently managing \$75K fund).
- Leading the team in ongoing Bloomberg Trading Challenge 2024 (virtual \$1M).