

Dhruv Belai

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EDUCATION

Northeastern University, Boston, MA

September 2023 – April 2025

Master of Science in Computer Science

Relevant Coursework: Scalable Distributed Systems, Algorithms, Machine Learning, Web Development

University of Mumbai, Mumbai, IN

January 2020 – June 2023

Bachelor of Engineering in Computer Engineering

Relevant Coursework: Data Structures, Software Testing, Software Engineering, Cloud Computing, Operating Systems

SKILLS

Languages: Python, Java, JavaScript (ES6+), TypeScript, Bash, SQL | **Databases:** MySQL, MongoDB, PostgreSQL
Frameworks & Libraries: React, Redux, Node.js, Express, Axios, Mongoose, jsPDF, JWT, bcrypt, Multer, REST APIs, JUnit, Jest, Cypress, Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, PyTorch | **Cloud, DevOps & Tools:** AWS (EC2, Lambda, S3, RDS, SageMaker), Docker, Git, GitHub Actions (CI/CD), VS Code, IntelliJ, PyCharm, Jupyter Notebooks

WORK EXPERIENCE

Data Scientist Teaching Assistant, Northeastern University

September 2024 – April 2025

- Provided constructive feedback while grading 15 assignments and 6 practicums for a class of 300+ students.
- Guided 100+ students in hypothesis testing, correlations, predictive modeling, and assessing statistical significance.
- Led a team of 15 TAs and assisted students for 10+ hours weekly in office hours, maintaining 99% grading accuracy.

Software Engineer Intern, Nibodh Educare

May 2022 – January 2023

- Crafted a full-stack web portal using HTML, CSS, JavaScript, and the MERN stack, integrating front-end and back-end with object-oriented principles and reusable components – reducing redundant code and saving development effort.
- Boosted system responsiveness by 20% via AWS, microservices, and scalable RESTful APIs, ensuring high availability.
- Drove agile development, using Git for version control and automating testing with Cypress and Jest.
- Liaised between educators and developers, turning teacher feedback into product specs that led to a user-friendly grade tracking module and strong pilot feedback.

PROJECTS

Paymate, Automate Bill Splitting

January 2025 – April 2025

- Spearheaded a mobile-friendly MERN stack web app to automate bill splitting, cutting manual effort from ~15 mins to under 3 mins with Tesseract OCR, Regex parsing, OpenAI LLM API, and an intuitive user-centered UI.

NBA Game Outcome Prediction Using Neural Networks

October 2024 – December 2024

- Engineered and optimized PyTorch models to predict NBA outcomes from 25 years of SQL-extracted data, achieving 65% accuracy – a 15% gain over baseline via feature engineering, hyperparameter tuning, and early stopping.

Distributed Key-Value Store

June 2024 – August 2024

- Architected a distributed key-value store in Java using TCP, UDP, and RMI, with custom architectures supporting get/put/delete operations, 2PC for fault-tolerant transactions, and PAXOS for high availability and consistency.

Stack Overflow Clone

January 2024 – May 2024

- Orchestrated a Stack Overflow clone using the MERN stack with JWT and Google OAuth authentication, complex MongoDB relationships, secure environment management, search functionality, and version control via Git workflows.

CERTIFICATIONS

- AWS Academy Cloud Architecting November 2024
- AWS Academy Cloud Foundations October 2024
- IBM Machine Learning with Python (Scikit-learn) August 2023
- FreeCodeCamp Machine Learning with Python (TensorFlow) June 2023
- AWS Academy Data Engineering January 2023