

Ayush Uday Desai

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Education

Northeastern University

January 2023 – December 2024

Master of Science, Computer Science | GPA: 3.83/4.00

Boston, MA

- Relevant Courses: Android Development, Program Design Paradigm, Machine Learning, Data Structure and Algorithms, Foundations of Artificial Intelligence, Database Management

University of Mumbai

August 2018 – May 2022

Bachelor of Engineering, Information Technology | GPA: 9.10/10.00

Mumbai, India

Professional Experience

Software Engineer, Mobile

January 2022 – December 2022

Papa Don't Preach

Mumbai, India

- Crafted and implemented a backend-driven inventory management app using **Java** and Jetpack components, leveraging **MVVM** architecture and improving garment tracking efficiency across production stages.
- Integrated QR code scanning functionality with ZXing library and camera sensors, enabling seamless garment scans at each production checkpoint.
- Leveraged Firebase Realtime Database for real-time synchronization of inventory data, enhancing team collaboration and reducing data update delays by **20 minutes per session**.
- Connected REST APIs with native Android UI to display real-time data updates, cutting manual errors by **20%**.
- Refined build processes by optimizing Gradle scripts, achieving **18% faster** app deployment cycles.

Technologies: Java, Android Studio, Gradle, REST, Firebase, Git, Jira, ZXing

Full Stack Engineer

June 2021 – September 2021

Manifest Solutions

Mumbai, India

- Designed frontend components for GPS-based school bus tracking using React.js, improving user interaction by streamlining real-time map visualizations for over **7 school administrators**.
- Refined backend architecture by indexing MongoDB queries, reducing API response time by **12 seconds**.
- Streamlined deployment with CI/CD pipelines via GitHub Actions, reducing build and deployment cycles by **40%**.

Technologies: React.js, Node.js, REST, MongoDB, Google Maps API, Git

Academic Projects

Text Translation System | [GitHub](#) | Python, Transformer, LSTM, Deep Learning

January 2024 – May 2024

- Constructed a **Seq2Seq** multilingual translation system with Transformer and LSTM models, reaching **0.78 BLEU** score across multiple language pairs.
- Optimized attention mechanism and hyperparameters, accelerating convergence and reducing training time by **28%**.

Image Transformation | [GitHub](#) | Java, MVC, Image Processing

September 2023 – December 2023

- Engineered a Java-based image processing application using MVC architecture, enabling **7** manipulation features.
- Applied Object Oriented Programming principles for a modular, scalable codebase, reducing redundancy by **20%**.

Efficient Search | [GitHub](#) | Python

January 2023 – April 2023

- Leveraged Trie for optimized data storage and retrieval, resulting in a **40%** improvement in search speed.
- Introduced an auto-complete feature leveraging graph algorithm, increasing user experience by **25%**.

Candle Stick Chart Pattern Recognition | [GitHub](#) | JavaScript, MERN Stack

January 2021 – May 2022

- Led the development of a real-time stock analysis tool using **React** and D3.js for visualizing candlestick patterns.
- Architected RESTful APIs with **Node.js** and Express, processing **10,000+** stock patterns daily.
- Integrated SVM and CNN models for classifying 12 patterns, enhancing prediction accuracy.
- Launched the website using **AWS Elastic Beanstalk**, automating scaling and management of the application.

Skills

Languages: Python, C++, C, C#, HTML5, CSS, Java, JavaScript, SQL, R, Swift

Database: SQL (MySQL, PostgreSQL), NoSQL (MongoDB, DynamoDB)

Frameworks/Tools: TensorFlow, PyTorch, Flask, Django, React, Node.JS, Git, SwiftUI

Cloud: AWS (EC2, S3, Glue, SQS, Lambda, SageMaker, Redshift, Elastic Beanstalk), Microsoft Azure