

Dhanshri Ahir

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EDUCATION

University of Massachusetts Amherst | Amherst, Massachusetts

Master's in Computer Science

Relevant Coursework: CS 589 (ML), CS 532 (Systems for Data Science), CS 515 (Algorithms, Game Theory and Fairness)

Fall 2025 - May 2027 (Expected)

College of Engineering Pune | Pune, India

Bachelor of Technology in Computer Science

Minor in Financial Engineering

Relevant Coursework: Adv. Data Structures, Algorithms & Complexity, Computer Architecture, Computer Networks, Operating Systems, Probability & Statistics for Computing

Aug 2018 - May 2022

CGPA:8.79/10

WORK EXPERIENCE

Associate - Deutsche Bank | Pune, India

Jan 2023 - Jul 2025

- Contributed to 5+ Spring Boot microservices in the bank's first highly impactful data product, streamlining extensive data workflows.
- Engineered a core Java component with Camel Routes to orchestrate product pipeline jobs, achieving over 90% test coverage through TDD.
- Constructed efficient Oracle PL/SQL queries and procedures, utilizing parallelism and optimizing complex joins to reduce runtime by 70%.
- Coded a bash shell script to unzip 8GB+ nested files in ~1.5 min; Optimized Spark transformations to deliver 30% rise in program efficiency.

Software Development Engineer - FinIQ Consulting | Pune, India

Jul 2022 - Dec 2022

- Implemented FIX Protocol in C++ for global banking clients across FX Derivatives, Structured Products, enhancing trade efficiency.
- Improved message processing time by 80% by integrating the Angular system with a threaded staging table, solving a key performance issue.
- Built a C# and PL/SQL module handling XML responses via REST API, verified by load testing for processing ~200 requests per minute.
- Streamlined dynamic FIX messaging and email-based pricing system for 10+ clients; contributed to HL system design for order workflow.

Summer Intern - FinIQ Consulting | Pune, India

Jun 2021 - Aug 2021

- Redesigned the company's web application using React Hooks & Material UI, creating dynamic templates (5 web pages each) with advanced search autocomplete, related suggestions, and custom themes—boosting user engagement by 20% and reducing navigation time by 30%.

ACADEMIC PROJECTS

Topic Modeling in Interview | Natural Language Processing, Latent Dirichlet Allocation, IR

[Link](#)

- Led a team of 3 to implement an iterative, probabilistic model (LDA), identifying major topics and conversation shifts to reduce human bias.
- Researched and analyzed five methods surveying 10+ papers based on topic modeling, coherence score, and change point detection(CPD).
- Processed 138 mock interviews (10.5 hours) of 69 MIT students using information retrieval methods like tokenization, lemmatization, etc.
- Performed hyperparameter tuning for LDA/LSA and CPD, identifying critical topic shift points with 87% accuracy and 75% precision.

Price Tracer - Software Engineering | React Hooks, Nodejs, Express, MongoDB, Nodemailer

[Link](#)

- Developed a real-time price tracker for products across five e-commerce sites with 1000+ active users and their authentication & profiles.
- Incorporated features for users to wishlist, upload URLs, set price thresholds, and get price drop emails, increasing user engagement by 30%.
- Adopted DOM Manipulation Scraping employing the high-level browser automation library Nightmare to gather data for 50+ products daily to analyze trends further, provide graphical visualizations and product recommendations, and deliver 20% more accurate recommendations.

ChatSphere: The Video Chat App | Reactjs, Python, SocketIO, MongoDB, WebRtc

[Link](#)

- Built a login-authorized chat room app allowing users to create personalized meeting channels, accommodating up to 6 participants per room.
- Engineered bidirectional client-server communication using WebSockets for text messaging and video conferencing via simple-peer library for multi-browser support, scaling to 100 concurrent users, optimized data transmission, and managed Cross-Origin Resource Sharing (CORS).

TECHNICAL SKILLS

Programming Languages & Tools: Python, C/C++, Java, HTML/CSS, SQL, NodeJS, Jupyter, LATEX, Git/GitHub, JUnit

DevOps: Git, Jenkins, Linux, Bash scripting.

Frameworks: Spring Boot, Flask, React, MERN, Scikit-learn, NumPy, Spark, Hadoop

Databases: Oracle, MongoDB, SQL/PLSQL.

PUBLICATIONS AND CERTIFICATES

Publications: Real-Time Classification of Leukocytes Using Deep Learning in Microscopic Imaging - IJRESM Journal - Dec 2024 ↗

Coursera Certificates: Improving Deep Neural Networks ↗, Neural Networks and Deep Learning ↗, Structuring ML Projects ↗

Geeks For Geeks - Technical Writing Contributor: Published articles on computer programming topics with 40k+ views by unique users. ↗