


VANSHIKA AGRAWAL (she/her)

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Education

University of Massachusetts Amherst

Expected: May 2024 - May 2026

Master of Science in Computer Science · GPA: 3.88/4

Amherst, Massachusetts

Current Coursework: Advanced Algorithms, Systems for Data Science, Theory of Software Engineering, Distributed and Operating Systems, Machine Learning, Data Management & Analytics

Maulana Azad National Institute of Technology

Jul 2018 – May 2022

Bachelor of Technology in Computer Science and Engineering · CGPA: 9.23/10 · Rank: 2/210

Bhopal, India

Coursework: Data Structures, DBMS, Operating System, Machine Learning, Natural Language Processing, Network Security

Professional Experience

Bose Corporation

June 2025 – Present

Cloud Identity Engineering Intern

Framingham, MA

- * Building a multi-phase automation pipeline using **Jenkins**, **Docker**, and **Python** to detect stale images in Kubernetes and publish CVE vulnerability reports.
- * Contributing to **Go**-based microservices on the Cloud Identity team, focusing on authentication and profile management in a **Kubernetes** environment.

Deutsche Bank Group

Jul 2022 – Jul 2024

Senior Technology Analyst

Pune, India

- * Developed a **microservice-based** application in the Investment Banking domain, consolidating 14 legacy Reconciliation systems using **Java**, **React.js**, **SQL**, and **Agile** methodologies.
- * Led the end-to-end development of a UI-driven configuration management & deployment system using **Spring Boot**, **Git**, & **Encryption**, reducing manual effort by 40% and improving efficiency across 5 teams.
- * Enhanced reconciliation workflows by developing sophisticated reconciliation features across **backend** and **frontend**, reducing manual workload for **15+** Business Analysts by 10 hours per week.
- * Boosted high-volume reconciliations by 40% through **Apache Spark** optimization, enabling real-time data analysis for fintech stakeholders and supporting faster, data-driven decisions.
- * Enforced **JWT**-based authentication for 450+ users and enforced granular Oracle **SQL**-based access control, ensuring 100% compliance and enhanced audit scores.
- * Ensured **OSS** compliance by establishing React.js coding standards and achieving **80%+ test coverage** using **JUnit** and **Jest**, reducing production bugs.
- * Reduced cross-service data exposure by 95% through a segmented **Oracle Database** solution for microservices, enforcing least-privilege access and improving security, compliance, and scalability.

Projects

Travel Planner

Dec 2024

- * Built a **React.js** and **Spring Boot** web app with a **LLM**, generating personalized itineraries within 5 seconds.
- * Formulated an **AI-powered** packing assistant with shareable checklists and Trip History tracking for trip management.
- * Created a Travel Planning Essentials suite with a Long Weekend Calculator, Travel Style Quiz, and Currency Exchange Tool for smarter trip planning.

UMate: A Roommate Matching Platform for University Students

Nov 2024

HackUMass 2024

CICS UMass

- * Constructed a web app with **React.js** & **Flask**, implementing 10+ APIs for user auth and profile management.
- * Optimized **MongoDB** database with nested JSON schemas & indexing; integrated **AWS S3** for image storage.
- * Engineered a **recommendation model** using cosine-similarity to suggest users with top 5 best matches.

Thrift - A Rent & Resale Channel

Mar 2021

SheHacks 2021

IIT Allahabad

- * Conceptualized a web app using **Django** & **SQLite** to enable clothing rental and resale, supporting real-time inventory updates and transaction management for up to 100 products.
- * Integrated **Twilio API** to build an automated messaging system, delivering real-time order updates to users.
- * Devised a **sentiment analysis** system using Logistic Regression, achieving 85% accuracy in assessing product likability.

Technical Skills

Languages: Java, Python, C++, HTML, CSS/SASS, JavaScript, SQL, Shell-Scripting, Go

Frameworks/Technologies: SpringBoot, React.js, Django, Flask, ActiveMQ, Docker, Kubernetes, Junit, Jest

Database: Oracle, MongoDB, Neo4j, MySQL

Cloud & DevOps: AWS, CI/CD, Jenkins, Git, GitHub, Bitbucket, Jira, Prometheus, Grafana

Concepts: Microservices, UI Design, Web Development, Machine Learning, Distributed Systems, Cloud Computing