

Harsha Jain HJ

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Software Engineer focused on backend systems, full-stack development, and applied machine learning. Experienced in Java, JDBC, SQL, and Python, with a track record of building scalable applications.

EDUCATION

ATME College of Engineering, Mysore

Bachelor of Engineering in CSE-AIML

CGPA: 9.08

Sadvidya Semi-Residential PU College, Mysore

PCMB

93%

TECHNICAL SKILLS

- **Programming Languages:** JAVA, SQL, Python
- **Frameworks:** Spring Boot
- **Databases/Cloud:** MySQL, MongoDB, Firebase
- **Tools & Version Control:** Git, GitHub, VSCode
- **Relevant Coursework:** Data Structures & Algorithms, Operating Systems, Object Oriented Programming, Databases, Machine Learning

EXPERIENCE

Hindustan Aeronautics Limited (HAL)

- **Internal Letter Management System:** Digitized the manual "Scan-and-Fax" workflow for the Overhaul Division by developing a centralized web platform for letter entry, routing, and PDF integration.
- **Impact:** Eliminated manual departmental mail/fax delays by enabling real-time cross-departmental visibility of replied-to documents and status reporting.
- **Mirage 2000 File Management System:** Engineered a custom, high-security "File Explorer" specifically for the Mirage 2000 overhaul department to manage sensitive internal technical documentation and folder hierarchies.
- Optimized data accessibility for engineers by building a localized indexing system for quick retrieval of aircraft overhaul records.

Hackathons — National & State level

- **Finalist:** "RVCExIITB CTF 2024," RVCE Bangalore: Solved cryptography and reverse engineering challenges; ranked among top finalists nationwide.
- **Winners:** "Invaders," MIT Mysore: National-level hackathon competition.

PROJECTS

Expense tracker — [LINK](#)

- Developed and deployed a full-stack Expense Tracker application for managing personal finances efficiently with a secure multi-user environment, created a user-friendly frontend design using React.
- Applied complete CRUD operations with user authentication and authorization using JWT, ensuring secure access and data privacy.
- Integrated MySQL database with Spring Boot and JDBC for seamless data management, and containerized the application using Docker and deployed it on Render.

Privacy-protected cyber-threat detection using Federated learning — [LINK](#)

- Built 4-client federated DDoS CNN (Flower, 99K params) achieving 92.6 percent accuracy.
- Engineered robust Multi-Krum FedAvg (adaptive client selection, anomaly logging, JSON round audits) to resist poisoned updates.
- Applied hybrid aggregation technique along with bulyan aggregation, achieved 78% global accuracy with a comparison of 61% with multi-krum .

Melanocytic-Nevi classification System using transfer learning — [LINK](#)

- Used ResNet50 architecture and transfer learning to classify skin conditions.
- Applied Image and pattern recognition techniques to clearly classify melanocytic lesions and normal skin.
- Technologies Used: resnet-50 (and other models for comparison), tensorflow, python.

LANGUAGES

English

Fluent

Tulu

Native / Mother Tongue