

Mohd Azeem

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EDUCATION

Central University of Kerala

Master of Science in Computer Science (M.Sc.); CGPA: 7.33/10

Kerala, India

2024 – 2026

- **Coursework:** Data Structures and Algorithms, Operating Systems, Computer Networking, Database Management Systems, Machine Learning, Software Engineering

Graphic Era University

Bachelor of Computer Applications (Computer Science); CGPA: 8.00/10

Dehradun, India

2020 – 2023

WORK EXPERIENCE

Lunar Guide, Inc.

Software Engineer

Kolkata, India

Dec 2025 – May 2026

- Architected and shipped **Python (FastAPI)** backend microservices for a live travel booking platform serving users across **3 countries**; applied object-oriented programming principles and unit testing to maintain code quality
- Engineered multi-provider API integrations for **3 booking services** (flights, hotels, Rail Europe) and automated Stripe payment workflows using webhook-based event handling, cutting booking error rate through input schema validation
- Optimized API throughput by **~30%** via caching and asynchronous processing; reduced deployment risk by maintaining **zero failed releases** across 5 months using GitHub Actions CI/CD pipelines

Corestone Innovations

Full Stack Developer Intern

Remote

May 2025 – Jun 2025

- Delivered cross-platform features across **3 application modules** (User, Admin, Delivery) using Flutter and JavaScript; authored unit tests and participated in peer code reviews to enforce quality standards
- Triaged and resolved **10+ defects** through root cause analysis; partnered with cross-functional teams in Agile/Scrum sprints, meeting all sprint deadlines across a 6-week engagement

PROJECTS

Hybrid ML Travel Recommendation System | Python, Scikit-learn, ALS, TF-IDF, PCA, pandas | M.Sc. Dissertation 2025 – 2026

- Designed and evaluated a hybrid recommendation engine combining **ALS Collaborative Filtering** and **TF-IDF Content-Based Filtering**, achieving **32.6% RMSE improvement** over baseline (0.8191 vs 1.2157)
- Constructed end-to-end ML pipeline on **500 users, 300 destinations, 12,779 interactions** at 94.2% sparsity – resolved cold-start and sparse data limitations of standard KNN-based methods
- Applied implicit feedback mapping (view=1, save=3, booking=5), CSR matrix construction, 80/20 train/test split, and 32-dimensional ALS latent factor learning; validated unsupervised semantic clustering via PCA with **100% personalization divergence**

Secure QR Code Entry System | Python, TypeScript, React.js, Next.js, PostgreSQL, Git

Sept 2025

- Developed and launched a full-stack QR-based entry verification system for a **500+ attendee** university event; executed functional and regression test suites, eliminating all critical defects pre-launch
- Configured Supabase backend with PostgreSQL, serverless Edge Functions, and real-time concurrent validation – sustained **zero system failures** throughout the live event

Psoriasis Disease Detection | Python, CNN, Image Processing, HTML, CSS

May 2023

- Trained and validated a CNN-based medical image classifier achieving **87% accuracy**; deployed a web interface for real-time image upload and automated prediction output

TECHNICAL AND NON-TECHNICAL SKILLS

Programming Languages: Python, Java, C, C++, JavaScript, TypeScript, SQL

Tools and Technologies: FastAPI, React.js, Next.js, Docker, Git, GitHub Actions, CI/CD, REST APIs, Microservices, Linux, VS Code

AI and ML: Scikit-learn, PyTorch, TensorFlow, ALS Matrix Factorization, TF-IDF, Collaborative Filtering, PCA, pandas, NumPy

Databases: PostgreSQL, Supabase, MySQL (familiar), MongoDB (familiar)

Core Fundamentals: Data Structures and Algorithms, Object-Oriented Programming, Operating Systems, Computer Networking, SDLC, Agile/Scrum, Unit Testing, Test Automation, Code Review

LANGUAGES

English — Hindi