Masood Khan

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EDUCATION

BMS Institute of Technology and Management, Bengaluru 2023 – 2027
B.E. in Artificial Intelligence and Machine Learning CGPA: 8.63

Presidency PU College, Hebbal 2021 – 2023
12th Board – Percentage: 90.6%

JSS Public School, HBR Layout 2011 – 2021
10th Board – Percentage: 91.6%

TECHNICAL SKILLS

Programming Languages: Java, Python, SQL, C++, C
Backend Development: Spring Boot, Spring Security, Flask, REST APIs, JWT Authentication, Hibernate, JPA
Frontend Development: Next.js, React.js, TypeScript, JavaScript, HTML, CSS, Tailwind CSS
Databases & Infrastructure: PostgreSQL, MySQL, Redis, Docker, AWS, Git, GitHub
AI/ML: Scikit-learn, XGBoost, NLP, Transformers, Supervised Fine-Tuning, Semantic Segmentation
Tools & Technologies: Postman, RabbitMQ, LangChain, FAISS, Flyway, Zustand, TanStack React Query

PROJECT EXPERIENCE

Zubayda By A3 – Full-Stack E-Commerce Platform zubaidabya3.com

- Architected a full-stack abaya e-commerce platform using Java 21, Spring Boot and PostgreSQL, implementing modular backend services for authentication, products, categories, inventory, cart, orders, addresses, reviews and wishlist.
- Implemented secure authentication and authorization using Spring Security, JWT, refresh tokens, BCrypt password hashing and role-based access control.
- Designed RESTful APIs following layered architecture (Controller–Service–Repository), with Hibernate, Spring Data JPA and structured DTO-based request/response handling.
- Developed a responsive storefront using Next.js 16, React 19, TypeScript and Tailwind CSS, integrating Zustand, TanStack React Query and Axios for frontend state and API management.
- Configured database schema versioning using Flyway, containerized application services with Docker, and worked with AWS infrastructure including RDS PostgreSQL and S3.

Research Project (Industry Collaboration – Unisys India Pvt. Ltd.) Jun 2025 – Present

- Developed a data-efficient reward modeling pipeline for proprietary ALGOL datasets using pairwise ranking techniques.
- Curated structured datasets containing 600+ samples and 3,000+ pairwise comparisons through filtering and augmentation.
- Engineered document-processing and FAISS-based semantic retrieval pipelines involving cleaning, chunking, filtering and indexing of technical datasets.
- Evaluated model performance using pairwise and groupwise accuracy metrics with confidence estimation techniques.

MetaRecom – Meta-Learning-Based Automated ML Recommendation *Python, Flask, Scikit-learn, XGBoost*

- Developed a Flask-based AutoML platform that profiles tabular datasets and recommends classification or regression algorithms using dataset meta-features and similarity-based meta-learning.
- Engineered a 32-feature dataset profiling pipeline covering statistical distributions, missing values, correlations, PCA-based descriptors and outlier indicators.
- Implemented a KNN-based meta-learning recommender with distance-weighted aggregation and RandomizedSearchCV for automated hyperparameter optimization.
- Integrated configurable GPU/CPU execution modes with XGBoost CUDA capability detection and CPU fallback handling.

Land Use / Land Cover (LULC) Change Detection Platform

- Developed a geospatial ML system using U-Net segmentation models and satellite raster datasets for land cover classification and temporal change detection.
- Implemented satellite image preprocessing, class-wise overlays and statistical change analysis using NumPy, OpenCV and raster processing workflows.

CERTIFICATIONS

- Complete Data Analyst Training – Udemy
- Python Fundamentals Certification – Infosys

ACHIEVEMENTS

- 3rd Place – NEURONOVA 12-Hour Hackathon (AI-Based Deforestation System).
- 2nd Place – Startup Sprint Hackathon, IEEE CS Chapter, BMSIT&M.