

MOHAMMED WASIM KHAN

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Professional Summary

Full Stack Developer and AI/ML Engineer with expertise in building scalable web applications and intelligent data systems. Proficient in the MERN stack (MongoDB, Express.js, React, Node.js), Python, and Machine Learning frameworks including TensorFlow and Scikit-learn. Open-source contributor to Apple's swift-nio, Vercel AI SDK, and Codex-Dream-Skin CI pipeline. Experienced in REST API design, database optimization, NLP pipelines, and RAG architectures. Currently working as a Software Development Instructor at NxtWave with prior internship experience at Vizag Steel Plant.

Technical Skills

MERN Stack: MongoDB, Express.js, React, Node.js, REST APIs, JWT Authentication, Redux, Context API
Frontend: React, Vite, Tailwind CSS, HTML5, CSS3, Responsive Design, Component Architecture
Backend: Node.js, Express.js, Flask, FastAPI, RESTful APIs, Middleware, MVC Architecture
Databases: MongoDB, PostgreSQL, MySQL, SQLite, Database Design, Query Optimization, Indexing
Languages: JavaScript (ES6+), TypeScript, Python, Java, C++, SQL, Bash
DevOps & Tools: Git, Docker, AWS, Linux, CI/CD, Postman, Jupyter, Agile/Scrum
Core CS: Data Structures and Algorithms, System Design, OOP, DBMS

Education

VIT-AP University, Amaravathi <i>Integrated M-Tech in Software Engineering (Computer Science)</i>	Nov 2021 – Present CGPA: 8.33/10
Narayana Junior College, Vizag <i>Intermediate (MPC)</i>	May 2018 – July 2020 CGPA: 8.88/10

Experience

Software Development Instructor Intern <i>NxtWave Disruptive Technologies</i>	Apr 2026 – Present <i>Hyderabad, IN (Hybrid)</i>
- Delivered structured frontend development instruction covering React, JavaScript, and modern web technologies to students, simplifying complex full-stack concepts into practical, project-based learning. - Reviewed and debugged student MERN stack projects daily, reinforcing best practices in component architecture, API integration, and MongoDB schema design. - Strengthened technical communication and code documentation skills by explaining UI/UX patterns, REST API design, and debugging workflows across varying skill levels.	
Software & Data Engineering Intern <i>Rashtriya Ispat Nigam Limited (Vizag Steel Plant)</i>	Jun – Jul 2024 <i>Visakhapatnam, IN</i>
- Built a full-stack healthcare management system using React and Node.js, supporting 5,000+ daily transactions with robust data integrity and a 20% reduction in patient wait times. - Developed and integrated RESTful APIs connecting frontend dashboards to backend databases, streamlining data flow across manufacturing operations. - Optimized PostgreSQL and MySQL queries through execution plan analysis and indexing, reducing average response time from 850ms to 240ms — a 72% improvement.	

Open Source Contributions

Apple (swift-nio) <i>Swift, Networking, POSIX I/O</i> View PR #3671 ↗	2026
Resolved a positional I/O failure on macOS terminal devices (e.g., /dev/stdout) by implementing dynamic fallback logic for ENXIO system errors, ensuring cross-platform stability across Apple's core networking framework.	
Vercel AI SDK <i>TypeScript, OpenAI Provider, Test Suite</i> View PR #17328 ↗	2025
Contributed to the core test suite of the Vercel AI SDK — a widely-used production framework for building AI applications — by resolving documentation and typographical errors in the OpenAI-compatible provider tests, improving codebase readability for contributing developers worldwide.	
Codex-Dream-Skin <i>GitHub Actions, CI/CD, PowerShell, UTF-8</i> View PR #52 ↗	2025
Upgraded the CI pipeline by implementing GitHub Actions for automated static checks and cross-platform regression testing (macOS, Windows, Ubuntu). Diagnosed and fixed a critical encoding bug in Windows PowerShell 5.1 corrupting Chinese characters by enforcing UTF-8 with BOM encoding across the repository.	

Projects

- AI Interview Preparation Bot** | *React, Node.js, Azure OpenAI* | GitHub ↗ **Jan 2026**
- Built an end-to-end full-stack AI platform with a React frontend and Node.js/Express backend, integrating Azure OpenAI APIs for real-time, resume-aware Q&A generation.
 - Designed a RESTful API layer managing PDF ingestion, vector-based retrieval pipelines, and dynamic response delivery — reducing interview preparation time by 40%.
- Smart Attendance System** | *Python, OpenCV, CNN, MySQL* | GitHub ↗ **Aug 2024**
- Engineered a real-time facial recognition attendance system with automated backend logging via MySQL and SQLite, processing 300+ concurrent daily entries with 98% detection accuracy.
 - Reduced manual attendance processing time by 90% through automated data pipelines, demonstrating full lifecycle development from model inference to database persistence.
- Spam Email Detection System** | *Python, Scikit-learn, NLP* | GitHub ↗ **Mar 2025**
- Built an NLP-powered classification pipeline with a Flask API backend, processing 15,000+ samples with 96% precision and 0.95 F1-score across Naive Bayes, SVM, and Random Forest models.
 - Designed the end-to-end pipeline from data preprocessing (tokenization, TF-IDF) through model inference to REST API response — mirroring full-stack ML integration patterns.
- Text-Based Emotion Classifier** | *Python, NLP, SVM, ANN* | GitHub ↗ **Jul 2024**
- Researched and implemented text classification techniques for Indian languages using Naive Bayes, SVM, ANN, and N-gram models to address multilingual linguistic challenges.
 - Improved retrieval and categorization of multilingual textual data by comparing classical ML and neural network approaches across diverse language patterns.
- CodeToCareer** | *React, Node.js, MongoDB* | GitHub ↗ **Dec 2025**
- Architected and deployed a full-stack MERN application featuring course management, real-time discussion forums, and user authentication serving 200+ active users.
 - Built scalable RESTful APIs with JWT-based role authentication (admin/student), achieving sub-150ms response times for 95% of endpoints through middleware optimization and query tuning.
 - Designed a normalized MongoDB schema with efficient indexing, ensuring consistent read/write performance under concurrent user load.
- Certifications & Achievements**
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- Gemini Certified University Student** | *Google* **Dec 2025**
- Object Oriented Programming - Basics to Advanced** | *Udemy* **Nov 2023**
- University Chess Player** | *Strategic planning and analytical problem solving*