

# Aamir Belal Khan

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[Github](#) — [Leetcode](#) — [linkedin](#) — [Portfolio](#)

## Profile Summary

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Motivated full-stack student developer skilled in the MERN stack, Python, and REST API workflows. Strong product-thinking mindset with the ability to break down ambiguous problems, design intuitive user flows, and build full end-to-end features. Hands-on experience with Django and Flask for backend applications, plus practical UI/UX and deployment experience. Fast learner who enjoys shipping useful, user-focused products.

## Technical Skills

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**Frontend:** React.js, TypeScript, Redux Toolkit, Tailwind CSS, HTML, CSS

**Backend:** Node.js, Express.js, Django, Flask, REST APIs, JWT Authentication

**Databases:** MongoDB, PostgreSQL, Supabase

**DevOps & Cloud:** Docker, Docker Compose, GitHub Actions (CI/CD), Cloudinary, Vercel, Render

**Machine Learning:** Python (NumPy, Pandas), Exploratory Data Analysis (EDA), Data Cleaning, Data Visualization, Scikit-learn, NLTK, TF-IDF, Logistic Regression, Decision Tree, Random Forest, KNN, SVM, Ensemble Models (Voting Classifier, Stacking)

## Projects

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### LearnEase – Role-Based LMS Platform (End-to-End Ownership)

*MERN, JWT, Cloudinary, Google API, Socket.io, Docker, GitHub Actions*

Built a complete learning management platform with student, instructor, and admin roles. Designed end-to-end user flows and implemented full-stack modules. Integrated Cloudinary for video uploads, real-time chat using Socket.io, and automated Google Meet scheduling. Dockerized both frontend and backend using Docker. Implemented CI/CD pipelines using GitHub Actions to run backend test cases on every push and pull request; deployments are blocked on test or syntax failure, ensuring the previously deployed version remains live. Backend is hosted on Render and frontend on Vercel with zero-downtime deployment guarantees.

GitHub: [LearnEase](#) — Preview: [Live](#)

### PayGate – Full-Stack Payment Gateway Integration

*Django REST Framework, React (Vite), PostgreSQL, Razorpay, JWT, Render, Vercel*

Built a secure end-to-end payment system with user authentication, Razorpay order creation, payment verification, and transaction tracking. Implemented CSRF protection, Razorpay signature validation, real-time payment status, admin dashboard, and audit logs. Deployed backend on Render and frontend on Vercel with production-grade security and API integrations.

GitHub: [PayGate](#) — Preview: [Live](#)

### SMS Spam Detection System – Ensemble Machine Learning Project

*Python, Scikit-learn, NLTK, TF-IDF, Kaggle Dataset*

Built an end-to-end text classification system using the Kaggle SMS Spam Collection dataset. Performed data cleaning, exploratory data analysis (EDA), text preprocessing (tokenization, stopword removal, stemming), and feature extraction using TF-IDF. Trained and evaluated multiple models including Naive Bayes, Logistic Regression, Decision Tree, Random Forest, SVM, and KNN. Improved performance using ensemble techniques such as Voting Classifier (hard and soft voting) and Stacking with a meta-model. Compared models using accuracy, precision, recall, F1-score, and confusion matrix, achieving high precision on imbalanced data.

Colab: [Spam Detection Project](#)

### Smart Study Assistant – AI-Powered Learning Tool (Basic–Medium Level, Ongoing)

*React (Vite), Node.js, Express, HuggingFace Inference API*

Built a full-stack learning assistant where users enter a topic and receive AI-generated summaries, quizzes, study tips, and optional math questions. Backend fetches Wikipedia data, processes it with an AI model, and returns structured JSON.

GitHub: [Smart-Study-Assistant](#) Preview: [Live](#)

## Education

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### B.Tech in Computer Science (AI & ML Specialization)

Medhavi Skills University (2024 – Present)

CGPA: 7.3

**12th Grade – CBSE**

Crescent Convent School (2023)

Percentage: 78%

**10th Grade – CBSE**

Crescent Convent School (2020)

Percentage: 84%

**Certificates**

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[NEC IIT Bombay](#) — [Wadhvani Foundation](#) — [Postman API](#) — [Hacktoberfest Super Contributor](#)