

MUHAMMAD ABDULLAH KHAN

AI-Focused Software Engineer · Full-Stack Developer · Research-Oriented Problem Solver

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SUMMARY

Software-Engineering undergraduate (**FAST-NUCES, Aug 2022 – Present**) specialising in AI/ML and full-stack delivery. Creator of **24 open-source projects** spanning emotion-aware recommenders, conversational agents, games, and web/mobile apps. **100 % ★5** freelance record on Fiverr. Experienced **Lab Demonstrator** who champions clean code, research rigour, and measurable impact.

EXPERIENCE

Freelance Full-Stack & AI Developer — Fiverr

Jan 2018 – Present

- Built production-grade web & mobile apps (MERN, Flutter/Firebase) for global clients.
- Integrated sentiment-analysis pipelines and custom recommenders, boosting engagement $\approx 35\%$.
- Completed **60 + contracts** with zero revisions on 80 % of orders through iterative demos and clear docs.
- Applied research-style A/B testing and model benchmarks to guide feature roll-outs.

Lab Demonstrator — Programming Fundamentals (PF), FAST-NUCES

Feb 2024 – Present

- *Lead weekly C/C++ lab sessions (~120 first-year students); design and grade assignments & quizzes.*
 - *Built an automated grading script that cut marking time by **40 %** while improving feedback consistency.*
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EDUCATION

B.S. Software Engineering — FAST-NUCES, Islamabad

Aug 2022 – Present (Expected Jun 2026)

Key coursework: Artificial Intelligence, Machine Learning, Data Structures & Algorithms, Software Construction & Design, Databases, Operating Systems.

PROJECTS (complete list—source code on GitHub)

<i>Title & Stack</i>	<i>Description & Highlights</i>
<i>AIMovieRecommenderProject</i> Python, TensorFlow, Flask	<i>Emotion-aware movie recommender; 82 % emotion-match accuracy.</i>
<i>Emotion-Aware Conversational AI</i> Python, PyTorch, Socket.IO	<i>Real-time chatbot that detects sentiment and serves tailored content; < 200 ms latency for 500 concurrent users.</i>
<i>Python Chess Engine (Alpha-Beta)</i> C++, Python	<i>Searches 5 ply in ≤ 50 ms using alpha-beta pruning with iterative deepening.</i>
<i>Social-Media Web App (MERN)</i>	<i>JWT auth, real-time chat, image uploads; CI/CD via GitHub Actions & Docker.</i>

Airbnb Clone Node.js, React, MongoDB	Full booking flow, advanced search filters, role-based access.
MERN Notes App	Secure rich-text notes with offline PWA support.
MERN Task Manager	Lightweight task tracker using React-Query state management.
Weather Apps (3 versions)	Front-end JS demo; Flutter + Firebase mobile (4 k+ beta downloads); React PWA.
React Vite App	Proof-of-concept with first paint < 0.5 s via code-splitting.
Multithreaded Ludo Game C++17, SFML	Thread-safe ECS-style architecture for local multiplayer with AI bots.
Simple NodeJS App	Boiler-plate REST API with Jest tests & Docker compose.
Book Lending System JavaScript, MongoDB	Tracks loans, overdue alerts; analytics dashboard.
WeatherApp (Flutter)	Cross-platform weather app with push notifications and offline caching.

Algorithm & SCD Series (Academic / Research)

- **Advanced Algorithm Projects Q_1 – Q_5_22i-2604** — dynamic programming, graph optimisation, heuristics (C++).
- **Software Construction & Design (SCD) Projects**
 - *FinalProjectSCD, SCD-project, SCDproj, SCDProjecti222604* — modular JavaScript/HTML apps.
 - *simple-nodejsSCD-app* — Node.js backend illustrating layered architecture.
- **AI-proj-** — exploratory emotion-based movie-recommendation prototype (Python).

(Every repo listed is public at [GitHub.com/MuhammadKhan148](https://github.com/MuhammadKhan148).)

ACHIEVEMENTS

- **Open-Source:** 24 public repos; flagship AIMovieRecommender ★ 150+.
 - **Competitions:** 1st Place – FAST Marathon; Winner – Twin-City Swimming; Finalist – National Critical-Thinking Tournament.
 - **Innovation:** Emotion-aware UX adopted by two client startups.
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TECHNICAL SKILLS

Languages: Python, JavaScript/TypeScript, C/C++, Dart, SQL

Frameworks & Libraries: React, Next.js, Node.js (Express), TensorFlow, PyTorch, SFML, Flutter

Dev & Data: MongoDB, PostgreSQL, Firebase, Docker, Kubernetes, GitHub Actions, REST, GraphQL

Concepts: Machine Learning, Sentiment Analysis, Recommender Systems, Clean Code, Algorithms, Game Theory

EXTRACURRICULAR & LEADERSHIP

- **Mentorship:** Coach juniors in coding interviews, AI projects, and Kaggle comps.
- **Community:** Co-organiser, FAST Coding Circle; run monthly AI study-jams.
- **Sports:** Athletics & swimming team captain—promoting discipline and teamwork.

References available on request.