

M Shayan Khan

Full Stack Engineer

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Education

FAST National University of Computer and Emerging Sciences
BS in Computer Science – Islamabad

Aug 2021 – Present

Experience

The Fitness Lab - Full Stack Developer

*Remote, Rawalpindi
Feb 2026*

- Designed and developed a full-stack gym management system using React and Supabase.
- Built a secure login system with separate access levels for Admin and Staff users.
- Created automated tools for member registration, attendance, and membership tracking.
- Integrated a payment logging system to manage transactions and member billing.
- Developed an analytics dashboard to track and visualize monthly revenue trends.
- Improved operational efficiency by automating membership expiration and status logic.

Naeem & Associates - Freelance Web Developer

*Remote, Islamabad
Oct 2025*

- Designed and deployed a business website using WordPress.
- Customized themes and layouts to match client requirements.
- Upgraded and improved an existing website's structure and user experience.
- Implemented content management features for easy administrative updates.
- Designed professional business cards consistent with brand identity.

Octans Digital - Intern

*Onsite, Islamabad
July 2024*

- Developed a Helmet Detection system with high accuracy using computer vision techniques.
- Filtered and created custom datasets for model training.
- Performed image pre-processing, model training; evaluated performance using accuracy and precision metrics.
- Worked with Python and OpenCV for real-time detection.

Projects

Career-Connect – Job Application Portal System

MySQL, Python

- Designed and implemented a relational database for a multi-role job application portal (Students, Recruiters, Admin).
- Created a normalized schema with tables for users, companies, job postings, and applications using MySQL.
- Implemented primary keys, foreign keys, and constraints to maintain referential integrity.
- Wrote SQL queries with JOINS, filtering, and aggregation to track accepted, rejected, and shortlisted candidates.
- Developed role-based authentication and authorization logic with admin reporting features.
- Integrated a Python-based interface with MySQL for CRUD operations and data retrieval.

Multi-threaded Real-Time Game Engine

C, OpenGL, POSIX

- Developed a real-time Pac-Man clone using C and OpenGL with a multi-threaded architecture for independent agent logic.
- Engineered a ghost AI system with each agent on a dedicated POSIX thread; used Semaphores and Mutexes

to prevent race conditions.

- Implemented synchronization primitives to manage Ghost House exit permits and speed-boost allocations across 6+ concurrent threads.
- Optimized game loop performance using high-resolution timers to maintain consistent frame rates and physics updates.

Skills

Programming Languages: C++, C, Python, Assembly, Java, HTML, CSS, JavaScript, SQL, React, Tailwind CSS, MySQL

Frameworks & Tools: Git, Linux, Jupyter Notebook, Anaconda, VS Code, Visual Studio, Sublime Text, SQL Server, Firebase, Supabase, Docker

Libraries & Packages: pandas, NumPy, SciPy, matplotlib, scikit-learn, OpenCV, TensorFlow, PyTorch, Hugging Face Transformers, FastAPI, Flask, pymc3

Productivity & Office: Microsoft Office (Word, Excel, PowerPoint, Outlook, Access), Notion, Trello, Google Workspace, Lucidchart, Jira