

MUHAMMAD UMAIR AFZAL

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Mobile APP Development | Full Stack Development | Database Management

Developing high-performance cross-platform apps through Flutter and React Native, cloud integration, and UI/UX design.

Tech-savvy and aspiring Full Stack Developer with a passion for designing efficient, scalable, and user-friendly applications. Skilled in developing both mobile and web solutions, with a strong command of modern programming languages, frameworks, and databases. Experienced in creating responsive interfaces and smooth user experiences tailored for diverse platforms and devices. Adept at integrating real-time features that enhance functionality and improve overall system performance. Demonstrated ability to design back-end systems and seamlessly connect them with intuitive front-end interfaces. Skilled at consuming and designing APIs, as well as incorporating third-party services to enrich applications with extended features.

Core Competencies

Frontend & Backend Development | Software & App Development | Cloud Integration | Database Management | API Integration | Version Control & Collaboration | Networking & System Concepts | Data Structures | UI/UX Fundamentals | Security Implementation | Cross-functional Collaboration | Technical Troubleshooting | Process Improvement

Technical Skills: Flutter | React Native | React | HTML | CSS | JavaScript | Dart | .NET Framework (MVC, EF Core, ADO.NET) | REST APIs | Node.js (Basic) | SQL Server | SQLite | MongoDB | Firestore | Firebase (Authentication, Cloud Functions, Console) | Cloudinary | Microsoft Semantic Kernel | Model Context Protocol (MCP) | Vector Embeddings (ChromaDB, Qdrant) | RAG Concepts | Git & GitHub (Versioning) | Docker (Basics) | Postman | Networking Fundamentals (TCP/IP, LAN setup, Routing & Switching basics) | Virtual Machines | C# | C++ | Java | Visual Studio Code | Android Studio

PROFESSIONAL EXPERIENCE

Internship | NECOP

07/2025 – Present

- Engineered AI-driven tools by integrating Microsoft's Model Context Protocol (MCP) for seamless model and application interoperability.
- Developed .NET Core MVC web applications with database integration, applying EF Core and ADO.NET across SQL Server and SQLite.
- Implemented a vector embeddings pipeline with ChromaDB to enable semantic search within a Retrieval-Augmented Generation (RAG) workflow.
- Integrated the Llama model using Semantic Kernel and created custom plugins to support task automation and text processing, including analysis, transformation, and keyword extraction

FEATURED PROJECTS

Stemp21*(FLUTTER + FIREBASE)

- Built a cross-platform school management app with secure role-based access for clients, administrators, teachers, students.
- Deployed Firebase authentication and real-time database enabling secure liaison and seamless multi-role access across users.

SOLARMATE *(FLUTTER + FIREBASE)

- Designed and deployed an end-to-end solar assistance platform integrating Firebase services for authentication, data persistence, and cloud storage, ensuring seamless and reliable user experience.
- Delivered interactive modules including solar guides, inverter details, and marketplace listings, providing users with personalized solar insights and local shop discovery.

LAN SPHERE *(FLUTTER + SQLITE)

- Established a peer-to-peer chat system using sockets for real-time LAN messaging, featuring QR-based identity exchange and SQLite-powered local message persistence with full offline support.
- Designed a lightweight, responsive UI optimized for low-bandwidth environments, leveraging local caching and efficient data handling to ensure smooth performance without internet connectivity.

EXPENSE TRACKER *(C# – ENTRY LEVEL PROJECT)

- Built a Windows desktop expense tracking system using C# WinForms with SQL Server backend, enabling structured transaction storage, retrieval, and budget monitoring.
- Implemented SQL DataAdapter with data binding to synchronize user inputs and database records, ensuring reliable CRUD operations and consistent data accuracy.

EDUCATION & PROFESSIONAL DEVELOPMENT

BS in Information Technology – 3.18/4.0