

MUHAMMAD SAYYEDAIN

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EDUCATION

Bahria University

Bachelor of Science in Computer Science

Lahore, Pakistan

Sept. 2022 – Expected June 2026

TECHNICAL SKILLS

Core Stack: Dart (Flutter), JavaScript (Node.js), SQL, Firebase (Firestore, Auth)

Backend & APIs: RESTful Architecture, Express.js, Cloud Functions, Postman

Languages & Tools: Python, C++, Git/GitHub, VS Code, Android Studio

Engineering Concepts: MVC Architecture, State Management (Provider/Bloc), OOP, DSA, DBMS

EXPERIENCE

OptimusFox

Mobile App Development Intern

Lahore, Pakistan

June 2025 – July 2025

- Engineered a full-stack **Property Management System** using **Flutter** and **Firebase**, facilitating real-time booking.
- Designed a scalable NoSQL schema in **Firebase** to handle concurrent bookings, significantly reducing query latency.
- Implemented secure **Role-Based Access Control (RBAC)** for separate Admin and User environments.
- Integrated **Hive local storage** to enable offline data persistence, improving app reliability in low-network areas.

PROJECTS

Dental Diagnostic System (FYP) | *Flutter, Node.js, REST API, Python Integration*

In Progress

- Lead Engineer for a medical diagnostic platform integrating AI-powered image analysis into a mobile workflow.
- Developing a high-performance **Node.js Middleware API** to bridge Flutter with the Python inference engine.
- Designing a secure data pipeline for image transmission, preprocessing, and real-time inference retrieval.
- Building an advanced UI rendering system to display diagnostic overlays (bounding boxes) on X-rays.

PetConnect – Adoption Platform | *Flutter, Firebase, WebSocket*

GitHub

- Developed a scalable mobile marketplace with swipe-based pet discovery and social interaction.
- Built a real-time chat system using **Firebase WebSockets** ensuring sub-second delivery.
- Implemented multi-step onboarding and dynamic image uploads with optimized state management.

FoodBasket – E-Commerce Solution | *Flutter, Deep Linking, OAuth, Provider*

GitHub

- Implemented a full **Deep Linking Referral System**, enabling users to share product/cart routes through external URLs.
- Integrated secure **OAuth 2.0 Authentication** with Google and Facebook using Firebase Auth.
- Designed a robust **Cart State Logic** using Provider, supporting auto-price calculation and item ranking.
- Created a responsive product grid UI and validated layouts with **Device Preview**.

SwiftChat – Real-Time Messenger | *Flutter, Firestore Streams, Async Programming*

GitHub

- Developed a lightweight messaging client focusing on asynchronous data handling via **Firebase Streams**.
- Implemented secure **Google Sign-In** with persistent session state management.
- Optimized UI rendering using **StreamBuilder** to ensure instant message updates without manual refresh.

CERTIFICATIONS

Supervised Machine Learning: Regression and Classification | [Certificate Link](#)

Stanford Online (Coursera) – Instructor: Andrew Ng

Validated foundational knowledge in regression, classification, and model evaluation.