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Profile Summary

Computer Science student at FAST-NUCES with hands-on experience across **Software Engineering, Full-Stack Web Development, Android and Mobile Application Development, Artificial Intelligence, Machine Learning, Computer Vision, Automation, and Database Systems**. Experienced in building end-to-end applications involving modern frontend frameworks, backend APIs, real-time systems, AI-powered services, mobile applications, web scraping, automation workflows, and data-driven systems. Strong foundation in **Object-Oriented Programming, Data Structures, Algorithms, Database Management Systems, Software Engineering, AI/ML, and system design**.

Education

FAST National University of Computer and Emerging Sciences, Islamabad

Aug 2023 – Present

BS Computer Science

Technical Skills

Programming: C++, Java, Kotlin, Dart, Python, JavaScript, TypeScript, SQL, PHP, Rust

Web Development: React, Next.js, Vite, HTML5, CSS3, Tailwind CSS, responsive web development

Backend & APIs: Node.js, FastAPI, REST APIs, WebSockets, PHP, authentication, API integrations

Mobile Development: Android SDK, Kotlin, Jetpack Compose, Material 3, Flutter, React Native, Expo, MVVM

Databases: PostgreSQL, MongoDB, MySQL, SQLite, Firebase Firestore, Redis

AI / ML / Computer Vision: Scikit-learn, YOLO, MediaPipe, Machine Learning, Computer Vision, AI APIs, classification, feature engineering, cosine similarity, object tracking

Automation & Integrations: AI automation, chatbot development, WhatsApp automation, web scraping, Google Maps data extraction, OpenRouter, Evolution API, real-time dashboards

Tools & Platforms: Git, GitHub, Android Studio, VS Code, Firebase, Cloudinary, REST clients

Core Concepts: OOP, Data Structures, Algorithms, DBMS, Software Engineering, Machine Learning, Artificial Intelligence, Computer Networks, File Handling, System Design

Selected Projects

Scrappers All-in-One — Multi-Platform Business Data Scraper

[GitHub](#)

- Developed a multi-platform business data scraping and monitoring platform with a modern Next.js frontend and FastAPI backend.
- Implemented real-time scraper monitoring using WebSockets and designed workflows for collecting and processing business data.

WhatsApp AI Assistant — AI Chatbot & Automation Platform

[GitHub](#)

- Built a production-oriented AI chatbot using FastAPI, Evolution API, OpenRouter, PostgreSQL, and Redis.
- Implemented conversation history, AI-powered responses, media handling, caching, and automated WhatsApp interactions.

AthleteVision — AI Sports Analysis Platform

[GitHub](#)

- Developed an AI-powered sports video analysis system for football and cricket.
- Integrated YOLO-based player detection, ByteTrack tracking, MediaPipe pose estimation, and automated video annotation for coaching analysis.

AI Web Caller & Interview Scheduler

[GitHub](#)

- Developed an AI-powered web application concept for automated calling, interview scheduling, and workflow automation.
- Designed the system around Python-based AI services and automated communication workflows.

Intelligent Reading Comprehension & Quiz Generation System

AI/ML Course Project

- Developed an AI system for automated question generation and answer verification using the RACE dataset.
 - Implemented Logistic Regression, SVM, Naive Bayes, and Random Forest models for classification tasks.
 - Built distractor and hint generation modules using cosine similarity and feature engineering techniques.
- Fiora Rosa — Full-Stack E-Commerce Platform** [Live Website](#)
- Developed a complete e-commerce platform with a modern React/Vite frontend, Node.js backend, MongoDB database, and Cloudinary media storage.
 - Implemented product management, categories, inventory, pricing, product imagery, and responsive user interfaces.
- EMU Tech — Software Company Website** [Live Website](#)
- Designed and developed a professional software/technology company website with responsive layouts and modern web interfaces.
 - Focused on presenting software services, technology solutions, and company information through a modern frontend.
- FASTable — University Timetable Platform** [Live Website](#) [GitHub](#)
- Built a university timetable management application with schedule organization, automated reminders, and offline accessibility.
 - Developed and deployed a responsive web interface for viewing university schedules.
- Clothing Brand Website** [GitHub](#)
- Developed a responsive e-commerce website with product catalogs, category browsing, and mobile-first UI design.
- VitalTrack Lite — Offline Android Health Tracker** [GitHub](#)
- Developed a privacy-first offline Android application using Kotlin, Jetpack Compose, and Material 3.
 - Implemented tracking for steps, calories, water, sleep, heart rate, workouts, diet, and BMI using local storage.
- BatteryX — Android Battery Health Monitor** [GitHub](#)
- Built a Jetpack Compose Android application for monitoring battery health, charging speed, temperature, usage, and optimization information.
- Sajdah — Offline Islamic Android Application** [GitHub](#)
- Developed a modern offline Android application featuring prayer times, customizable reminders, Qibla compass, and Zakat calculator.
- Socially — Social Media Mobile Application** [Frontend](#) [Backend](#)
- Developed a social media application with Firebase Authentication, Firestore, posts, user interactions, and notifications.
 - Structured the application into frontend and backend components for scalable application development.
- QR Studio AI — Android QR Application** [Private Project](#)
- Developed an Android application focused on QR generation and intelligent QR-related functionality using Kotlin.
- Movie Trailer App** [GitHub](#)
- Developed a Flutter application using the TMDB API for trending, top-rated, upcoming, searchable, and detailed movie information.
- FairTurn — Offline Decision-Making Application** [GitHub](#)
- Built a local-first Flutter application using SQLite for collaborative decision-making and preference tracking.
- Location Alert & Geofencing Applications** [Flutter](#) [React Native](#)
- Developed location-aware mobile applications with GPS geofencing, background location tracking, and local notifications.
- React Native Todo Application** [GitHub](#)
- Built a lightweight cross-platform task manager using React Native and Expo with search, task completion, and local persistence.
- Loan Management Desktop Application** [GitHub](#)
- Developed a PyQt6 desktop application for customer management, loan records, installments, automated interest calculations, and documents.
- Advanced POS System** [Course Project](#)
- Developed a retail POS system with inventory management, billing, sales tracking, and file-based persistent storage using OOP principles.
- Warehouse Storage Optimization using Genetic Algorithm** [GitHub](#)
- Implemented a genetic algorithm-based optimization approach for improving warehouse storage allocation and organization.
- Multi-Robot Path Planning using BFS** [GitHub](#)
- Implemented breadth-first search techniques for multi-robot path planning and navigation problems.
- CosmicDrift — 3D Space Runner** [GitHub](#)
- Developed a 3D space runner using JavaScript and Three.js featuring drag-based steering, neon environments, and color-matching game mechanics.
- Zuma Game** [GitHub](#)
- Developed a Zuma-style arcade game in Assembly Language with collision detection, projectile movement, scoring, and low-level memory handling.

Additional Projects

ComicVerse [GitHub](#)

Bank Management System [GitHub](#)

Socially Backend [GitHub](#)

Twitter Scraper [GitHub](#)

GHL Social Media Automation Private Project

Flutter Navigator [GitHub](#)

POS System [GitHub](#)

Digital Counter Proteus Design [GitHub](#)

Google Maps Scraper Private Project

EMU Private Project

Achievements & Languages

- Built and deployed projects spanning AI/ML, computer vision, full-stack web development, Android, Flutter, React Native, automation, databases, APIs, and software engineering.
- Experience developing AI-powered assistants, automation systems, real-time dashboards, web scrapers, mobile applications, and end-to-end web platforms.
- Strong understanding of software engineering fundamentals, object-oriented programming, data structures, algorithms, DBMS, machine learning, and artificial intelligence.
- Experienced with Git and GitHub-based development workflows, API integrations, database-driven applications, and modern development tools.
- **Languages:** English (Professional), Urdu (Native)