

Ahmad Kaleem Bhatti

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Summary

Computer Science undergraduate with hands-on experience in backend development, AI applications, and access-control systems. Built Qualix, a lead-qualification platform, and Actsurance, an authorization gateway for AI agent tool calls. Experience includes Python, FastAPI, REST APIs, RAG, RBAC, Firebase, PostgreSQL, and cryptographic authorization, alongside current work on backend systems for a live IoT platform at Demetronics.

Technical Skills

AI and ML: Retrieval-Augmented Generation (RAG), LangChain, ChromaDB, ONNX Runtime, Prompt Engineering, Tool Calling, AI Agents, OpenAI API, Claude API, Gemini API, OpenRouter API

Languages: Python, TypeScript, Go, Dart

Backend and Data: FastAPI, Node.js, Express.js, PostgreSQL, Firebase, Render, Railway, Redis, Celery, Supabase, Pandas, NumPy, Matplotlib

Security and Infrastructure: Role-Based Access Control (RBAC), Firebase Custom Claims, JWT, Open Policy Agent (OPA), Cryptography (Ed25519, SHA-256), Docker, Git, CI/CD, REST APIs

Frontend and Mobile: React, Flutter

Experience

Demetronics (Private) Limited

Full Stack Engineer Intern

Aug 2026 – Present

Islamabad, Pakistan

- Built a greenfield IoT Admin Portal and Node.js/Express.js backend, adding idempotent routes for remote device operations including resets, actuation, and deletion.
- Implemented Role-Based Access Control (RBAC) with Firebase Custom Claims, creating a centralized authorization model across Admin and Super Admin permission tiers.
- Diagnosed a data-sync flaw in the Flutter app, which stored usage history only in local `SharedPreferences`, then redesigned the flow to sync with the backend.
- Audited the legacy codebase for exposed database URIs and JWT keys, then carried out credential rotation and secure environment-variable management to close the exposure.

Kaar-e-Kamal Welfare Foundation

Application Developer Intern

Jul 2026 – Present

Islamabad, Pakistan | Hybrid

- Building a Flutter and Go welfare-services application that digitizes Rashan, Fee Assistance, Blood Donation, and Rozgar services for the foundation's beneficiaries.
- Implementing RBAC with JWT, PostgreSQL, and Supabase Auth across Admin, Operations, Field Worker, and Beneficiary roles, with verification from field check to approval.

Atif E-Commerce Services

Sales and Data Assistant, E-Commerce Automation

Feb 2026 – May 2026

Islamabad, Pakistan

- Cut Amazon and eBay listing-update time approximately 35% by building a Python and Pandas automation tool with a GUI for stock, pricing, and order tracking.
- Improved customer-support handling speed by approximately 45% by integrating an LLM-based email classifier into a structured triage workflow.
- Reduced manual correction effort by approximately 50% with automated Python and Pandas data-validation scripts across large SKU and inventory datasets.

Projects

Actsurance

Founder

- Built a zero-trust authorization gateway for AI agent tool calls, routing requests through a seven-stage, fail-closed pipeline covering Auth, Firewall, OPA, Risk, Broker, and Receipts.
- Implemented a cryptographic receipt engine using Ed25519 signing and a SHA-256 hash chain, giving every authorized AI agent action an immutable, verifiable audit trail.
- Built a two-layer defense pipeline combining an RE2-based firewall that screens payloads against OWASP-style rules with an ONNX Runtime risk model, avoiding external LLM calls.

Qualix

Founder

- Built an agentic AI platform for lead qualification across WhatsApp and Instagram, using RAG with LangChain and ChromaDB for buyer-intent detection and objection handling.

- Implemented tool-calling workflows through FastAPI backend functions that retrieve context, qualify leads, and trigger follow-ups, validated with PyTest during local development.

PakLand

Completed Educational Project

- Built an n8n and GPT-4o-mini moderation workflow that flags scam listings for human review, correctly classifying 8 of 10 (80%) in a self-test.
- Designed a 0–100 Trust Score for a Flutter and Firebase real-estate marketplace, combining verification status and reviews to gate featured-listing promotion behind a 75+ score.

Leadership and Activities

Air University Computing and Innovation Society (AUCIS)

Nov 2024 – Present

Senior Lead Developer

Islamabad, Pakistan

- Progressed from Developer to Senior Lead Developer, contributing to the university’s computing and innovation community.

Education

Air University

Sep 2024 – Sep 2028 (Expected)

Bachelor of Science in Computer Science

Islamabad, Pakistan

Certifications

- Object-Oriented Data Structures in C++, University of Illinois, Coursera
- Fundamentals of Generative AI, Microsoft Learn
- CS50x, Introduction to Programming with Python, Harvard, edX