AHTISHAM DILAWAR

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SUMMARY

Software engineer shipping production AI agents and backends in Python and TypeScript. Designed **Droog**, a due-diligence agent supporting risk reviews for PSPs processing more than **$5M in transaction volume**, and wrote the WhatsApp plugin in the official **Hermes Agent** catalog (Nous Research). Experienced in agentic RAG, MCP, secure APIs, and human-in-the-loop workflows.

PROFESSIONAL EXPERIENCE

Software Engineer **March 2026 - Present**

DeFa by Invoicemate

- Designed and built **Droog**, an LLM-powered risk agent used by risk officers to assess PSP prefunding applications across **14 credit-risk criteria** and support oversight of more than **$5M in transaction volume**.
- Engineered **LangGraph** and **Azure AI Search**-based agentic RAG pipelines to analyze financial statements, corporate documents, transaction data, and compliance evidence, producing traceable, source-grounded findings.
- Integrated financial analysis, wallet investigation, and transaction-monitoring workflows to surface repayment risks, missing or conflicting evidence, and unusual activity in decision-ready risk reports.
- Implemented evidence citations and **human-in-the-loop controls**, enabling risk officers to validate, challenge, and revise recommendations while retaining responsibility for final prefunding decisions.

Full Stack Developer **Oct 2024 - Mar 2026**

Outstep Technologies

- Built backend systems for **Altruva AI**, a financial AI platform for non-profit organizations, using **FastAPI**, **Azure AI Foundry**, and **Azure AI Search**-based RAG pipelines.
- Engineered WhatsApp-based real estate agents for **Holatrato** using **Gemini**, **Twilio**, and **Meta APIs** to automate property inquiries and meeting bookings.
- Developed **MCP servers** that connected AI agents with business tools including **QuickBooks**, **Salesforce**, and **HubSpot**.
- Implemented secure authentication and infrastructure workflows using **Auth0**, **Azure Key Vault**, **Resend**, and **Azure Communication Services**.

Backend Intern **June 2024 - Aug 2024**

Musketeers Tech, Lahore

- Built parts of an internal **Salary Calculation System** with **Node.js** and **Strapi**, automating payroll processing and financial reports.

OPEN SOURCE & PERSONAL PROJECTS

Hermes WhatsApp Agent Platform · *Open-source plugin for Nous Research's Hermes Agent* **[Python, asyncio, httpx]**

- Built the Hermes platform plugin for Meta's new **WhatsApp Agent Platform** API so people can text their own agent on WhatsApp; **merged into the official Hermes plugin catalog**, running in production on my server.
- Built **at-least-once delivery** on a rate-limited API: replies are never lost, and restarts never replay old messages.

FBR Invoicer App · *Desktop Application* **[Tauri, Rust, TypeScript]**

- Launched a desktop application currently utilized by **5+ businesses** for automated, **FBR-compliant** digital tax invoicing.
- Engineered an offline-first architecture with real-time QR generation and automated tax scenario detection.

FuzzSeer · *LLM driven Solidity Smart Contract Fuzzer* **[Next.js, FastAPI, Echidna]**

- LLM-assisted Solidity fuzzer: static analysis ranks high-risk call paths for **Echidna** instead of brute-forcing random sequences.

Flex Student Portal MCP Server · *AI Automation Tool* **[Python, FastMCP, Selenium]**

- **MCP** server for the university's Flex portal (**FastMCP + Selenium**) so LLMs can query marks, transcripts, and attendance.

TECHNICAL SKILLS

- **Languages:** Python, TypeScript, JavaScript, SQL, Rust
- **Backend:** FastAPI, Node.js, Express.js, Next.js, Strapi, Auth0, OAuth 2.0
- **Integrations:** QuickBooks, Salesforce, HubSpot, Twilio, Meta APIs, Resend
- **AI/Agents:** Hermes Agent, LangGraph, LangChain, RAG, MCP, OpenAI API, Gemini, Azure AI Foundry
- **Cloud & Data:** Azure AI Search, Cosmos DB, Key Vault, AWS Lambda, S3, Supabase, MongoDB, Docker, GitHub Actions

EDUCATION

FAST National University of Computer and Emerging Sciences · *BS Computer Science*