Mustafa Babar

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SUMMARY

Backend Software Engineer with a First-Class CS degree from the University of Leicester. Started building software at school – automating reselling businesses, building APIs, and creating tools for fun and profit. Joined BP as a graduate engineer, grew into owning revenue-critical features on Titan, BP's multi-billion-pound trading platform – working within distributed microservices to deliver P&L valuation engines and settlement workflows in C#. More recently led data and ML pipeline engineering on a startup-style team in Python & React. Outside of work I independently built a profitable algorithmic trading engine in Go. British Citizen based in London, open to backend engineering roles in fintech and trading.

TECHNICAL SKILLS

Languages: Go, C#, Python, Swift, TypeScript, C++,
Frameworks: ASP.Net, FastAPI, Flask, SwiftUI, React
Infrastructure: Kubernetes, Docker, AWS, OpenShift, Azure DevOps,
Data & ML: Palantir Foundry, YOLO, PaddleOCR, PyMuPDF
Databases: SQL, MySQL, Microsoft SQL Server, SQLite, MongoDB

WORK EXPERIENCE

BP London
Software Engineer Sep 2025 – Present

- Built an AI agent audit platform in Python using Claude and LLM orchestration to analyse BP codebases for quality, architecture and staleness – generating cost-impact scorecards adopted across the refining department
- Rebuilt OCR stack in Python, cutting pipeline runtime from 18 hours to 30 minutes and lifting accuracy from 25% to 95%
- Built and deployed a YOLO object detection model to production, trained on engineer annotations, classifying industrial plant diagrams at scale across BP's asset infrastructure
- Engineered a geometric analysis pipeline in Python for automated relationship detection across P&ID diagrams, deployed to production
- Eliminated OOM failures and reduced memory consumption across distributed ML pipelines, improving reliability and throughput under production load
- Owned digitisation of the Castellon Plant – built bulk PDF ingestion and extraction pipelines in Python using OCR and structured text extraction to process real production plant documentation

BP London
Software Engineer Sep 2023 – Sep 2025

- Built the valuation microservice in Titan, BP's multi-billion pound proprietary trading platform, calculating estimated and actualised P&L across full LNG trade lifecycles in C#
- Migrated Titan's monolithic settlements system to idempotent REST API microservices in C# — implementing invoice adjustments, transaction processing and email dispatch across distributed trading workflows
- Sole developer on a greenfield financial UI in C# and React/TypeScript — LNG trading teams visualise and validate volumetric consumption data with export workflows for plant billing confirmation
- Optimised high-load SQL scripts reducing CPU utilisation by 40% and financial statement generation time by 300%
- Led migration of LNG's authentication service from OpenShift to Knative, improving scalability of a financially critical distributed service
- Built a C# and ASP.Net data pipeline with Azure Blob Storage feeding a £1M+ funded AI project

EDUCATION

UNIVERSITY OF LEICESTER Leicester
First-Class Honours Bachelor of Science Sep 2020 – Jul 2023
Computer Science

PROJECTS

MBot – Algorithmic Trading Engine | Go, React/TypeScript, Wails | Solo Project Jan 2025 – Jun 2026

- Reverse engineered transaction structures across multiple Solana programs to enable accurate monitoring of on-chain coin creation events and execution of trades at the program level
- Engineered a low-latency transaction execution engine with a full state machine, rotating RPC groups, and an abstraction layer enabling new Solana programs to be onboarded with minimal overhead
- Independently designed and built a profitable full-stack algorithmic trading engine from scratch, spanning a Go backend,

React/TypeScript frontend, and shipped as a native desktop application via Wails
- Designed a WebSocket pub/sub architecture to stream live position updates, P&L data, and execution state between backend and frontend in real time
- Implemented multiple trading strategies (AFK, Quick Buy/Sell, Spam mode) with Solana wallet integration and Discord webhook alerting on trade outcomes and errors

ADDITIONAL

Languages:
Fluent in Urdu and English; Conversational Proficiency in Hindi

Certifications: University of Leicester Award Gold, Introduction to Containers w/ Docker, Kubernetes & OpenShift – IBM, Cloud-Native Development with OpenShift and Kubernetes – Red Hat