

# M Naveed Ashraf

Senior Software Engineer — Full-Stack • AI/ML • Cloud

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*4+ years building production web platforms (React, Next.js, Python) with strong cloud (AWS/Azure) and data skills.*

*Led an AI time-series forecasting initiative (Pakistan equities): end-to-end architecture, hiring, pipelines, training, and deployment.*

*Upwork senior engineer (part-time): blockchain, trading bots, and high-scale backend work.*

## Professional Experience

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4+ years of software engineering experience across full-stack, data pipelines, and ML systems. Key strengths: time-series modeling, scalable backends, cloud architecture, and stakeholder leadership.

### Current & Recent Roles

**AI Stock Prediction (PSX), [zafarstocks.com](https://zafarstocks.com), Pakistan, Partner & Technical Lead, July 2025 – now**

Own end-to-end architecture for a price prediction platform: data acquisition, feature engineering, model training/validation, and low-latency inference.

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Built a Python data pipeline to ingest exchange tick data from Oracle and aggregate to OHLCV; standardized calendars, session handling, and corporate action adjustments for modeling.

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Hired and lead an ML Engineer and a Data Scientist; run weekly tech/business syncs, translate business goals into measurable modeling targets and SLAs.

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Designed training workflow (versioned datasets, repeatable experiments, HPO, backtesting windows, leakage checks) and deployed inference via a stateless API integrated with the backend.

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Integrated inference outputs with a web frontend (led a frontend dev) and designed monitoring for drift, hit-rate, and latency.  
**Equity share:** 50% net profit.

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**Stack:** Python, pandas, NumPy, scikit-learn, time-series modeling, FastAPI, joblib, Docker; Oracle (ingest), PostgreSQL; AWS (EC2/S3), GitHub Actions. and a [common toolset](#)

**Upwork (thenewboston & clients), Senior Software Engineer (Part-time), 2024 – now**

Contributed to *thenewboston* (Django + React + PostgreSQL + Celery): feature delivery, performance tuning. (~20 hrs/week)  
Built and iterated algorithmic trading bots for the platform; experimented with multiple strategies and implemented scheduling, backtesting hooks, and observability. Resolved GitHub issues across blockchain and backend services; raised code quality via reviews, test coverage, and automated checks.

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**Stack:** Python, Django, DRF, Celery, React, PostgreSQL, Redis, Docker, GitHub Actions and a [common toolset](#)

**PromptLayer (AI Engineering Platform), [promptlayer.com](https://promptlayer.com), USA, Full Stack Software Engineer, Jun 2024 – Jul 2025**

Shipped a scalable large-file ingestion pipeline enabling multi-GB CSV uploads: S3 multipart upload, backend chunk orchestration, Redis queues, and real-time React WebSockets progress UI — eliminated timeouts and made ingestion resilient under load.

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Delivered production “Agents / Workflows” feature to automate multi-step tasks; implemented backend orchestration, task state machine, and auditability.

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Executed a zero-downtime migration of a hot PostgreSQL table primary key from INT to BIGINT (capacity remaining ~10% and shrinking ~1.5%/day); completed with DBA in 3 days with online backfill and safety gates.

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**Client’s feedback:** “Recognized by the co-founder for exceptional work ethic, strong technical expertise in React/TypeScript and Python Flask, problem-solving ability, and proactive business engagement, highlighted in an official reference letter.”

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**Stack:** Python, Flask/FastAPI, SQLAlchemy, PostgreSQL, Redis, Celery/RQ, AWS S3, SendGrid, React, WebSockets, Docker, Render and a [common toolset](#)

**Vaionex Corp, [vaionex.com](https://vaionex.com), Remote, Full Stack Developer, Apr 2023 – Jul 2023**

Contributed to multiple production web platforms with React.js/Next.js frontends and Python/Node.js backends; integrated payments and APIs. Led design/development of key modules using Next.js + Vercel APIs; optimized transactions with Paysafe

(25% more success rate). Deployed cloud-native services with Firebase and AWS; CI/CD pipelines for rapid iteration. **Projects Completed:**

- **AI-Forge** <https://www.aiforge.org> — Next.js + Supabase + OpenAI; enabled real-time sync, social sharing (30% higher organic acquisition).
- **Makeover.ai, PitchAI** <https://www.makeover.ai>, <https://www.pitchai.com> — Next.js/Node.js based apps with Firebase backends.
- **Relysia Blockchain Platform** <https://www.relysia.com> — Blockchain integrations and APIs.

**Gaper, [gaper.io](https://gaper.io), Lahore, Pakistan, Associate Software Engineer, Aug 2021 – Mar 2023**

Built responsive and user-friendly web applications using React.js and Next.js; improved performance with Redux (30% faster load times). Implemented GraphQL to optimize data fetching (40% fewer network calls), and developed REST/GraphQL APIs for complex business logic. Deployed and maintained apps on AWS with Dockerized backends and PostgreSQL/MySQL.

**Projects Completed:**

- **Job Scraper** — Python + Flask scraper to aggregate jobs from LinkedIn/Glassdoor/Indeed with validation for higher data quality.
- **ATS System** — Internal hiring platform (Next.js, Node.js, Firebase) with LinkedIn login, CV parsing, recruiter dashboards.
- **Joulea (Client)** <https://www.joulea.com> — Energy modeling platform (React + Flask + PostgreSQL, AWS EC2); designed APIs, automated deployments, mentored juniors.

## Selected AI/ML Projects

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**Market Price Forecasting (Pakistan Stock Market) — 2025**

Problem framing (targets, horizon, evaluation), leakage controls, rolling backtests, feature engineering (OHLCV transforms, calendar/market microstructure features).

Automated training pipeline with hyperparameter tuning; packaged models for inference (API) and integrated with backend + UI for signal delivery.

Added monitoring (latency, drift proxies, hit-rate, alerting) to close the loop post-deployment.

**LLM Agents / Workflows (PromptLayer) — 2024 – 2025**

Designed and implemented orchestration for agentic workflows (tool calls, retries, state machine) with full audit logs.

Integrated queues and backpressure to keep throughput stable under spiky loads; exposed progress via WebSockets to frontend.

**Trading Bots (thenewboston) — July 2025 – now**

Implemented strategy runners with scheduling, parameterization, and basic backtesting hooks; integrated persistence and metrics.

Built operational tooling (health checks, alerts) and contributed to app features around bots.

## Skills

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**AI/ML:** Time-series forecasting, feature engineering, model evaluation (backtesting, leakage checks), hyperparameter tuning, inference services, monitoring; LLM agents/workflows.

**Software Development:** Python (Flask, FastAPI, Django), JavaScript (React, Next.js), REST APIs, WebSockets, Celery/RQ, testing, code review, system design.

**Cloud & DevOps:** AWS (EC2, S3, RDS), Azure, Firebase, Docker, GitHub Actions, observability, zero-downtime migrations.

**Databases & Data:** PostgreSQL, MySQL, MongoDB, Oracle (ingest), SQL optimization, schema design, migrations, pipelines.

**Other:** Technical leadership, hiring, stakeholder communication, roadmap scoping, Agile delivery.

## Common Toolset

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pyenv, Poetry, Claude Code, Cursor, pycharm, pytest, Sentry, pre-commit, git, make, shell scripting, WSL (Ubuntu)

## Education

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**Bachelor of Science in Information Technology**, University of Agriculture Faisalabad, Pakistan, 2017 – 2021

## Links

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- Upwork profile: <https://upwork.com/freelancers/muhammadnaveedashraf531>
- GitHub: <https://github.com/m-naveed-ashraf>

- Open source code (validate authorship of the most of the lines with `git blame`):
  - <https://github.com/thenewboston-developers/thenewboston-Backend> (*fork*)
  - <https://github.com/thenewboston-developers/thenewboston-Frontend> (*fork*)
  - <https://github.com/thenewboston-developers/Bots> (*fork*)
  - <https://github.com/MagnivOrg/prompt-layer-library>
  - <https://github.com/MagnivOrg/prompt-layer-js>
  - <https://github.com/MagnivOrg/prompt-layer-docs>
- Technical blog (Notable posts):
  - Building a Scalable Asynchronous File Upload System: From Concept to Code: <https://medium.com/@mahernaveed/building-a-scalable-asynchronous-file-upload-system-from-concept-to-code-2c69aade351d>
  - How to Use Common Table Expressions (CTEs) to Avoid N+1 Queries in Hierarchical Data: <https://dev.to/naveed/how-to-use-common-table-expressions-ctes-to-avoid-n1-queries-in-hiera>
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