MUHAMMAD NOMAN RIAZ

Full-Stack AI Engineer

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PROFESSIONAL SUMMARY

Full-Stack AI Engineer specializing in building intelligent automation systems, conversational AI agents, and production-grade machine learning solutions. Expert in designing RAG pipelines, autonomous agent orchestration with LangChain, and scalable AI-powered applications using Python, FastAPI, and modern LLM frameworks. Proven track record in developing end-to-end AI systems from data collection and model training to deployment and monitoring. Skilled in web scraping, data engineering, and creating intelligent assistants that solve real-world business problems.

TECHNICAL SKILLS

AI & Machine Learning

- **Large Language Models (LLMs):** GPT-4, Claude, Gemini, Qwen, LLaMA, OpenRouter, Prompt Engineering
- **RAG Systems & Vector Databases:** LangChain, LlamaIndex, Qdrant, semantic search, document retrieval
- **Agent Orchestration & Frameworks:** LangGraph, OpenClaw, MCP (Model Context Protocol), multi-agent systems
- **Conversational AI:** Voice agents, chatbots, natural language understanding, dialogue management
- **ML Operations:** Model deployment, monitoring, MLflow, experiment tracking, production ML pipelines

Python & Backend Development

- **Python Frameworks:** FastAPI, Django, Flask, RESTful APIs, async programming, WebSockets
- **ML Libraries:** Scikit-Learn, XGBoost, LightGBM, Pandas, NumPy, Matplotlib, Plotly, Seaborn, SciPy
- **API Development:** OpenAPI/Swagger, authentication (JWT, OAuth2), rate limiting, API gateway, microservices

Data Engineering & Web Scraping

- **Web Scraping & Crawling:** Crawlee, Playwright, Selenium, BeautifulSoup, Scrapy, Puppeteer, anti-bot bypass
- **Data Processing:** ETL pipelines, data cleaning, feature engineering, exploratory data analysis (EDA), data validation
- **Workflow Automation:** n8n, Make.com, Celery, Prefect, scheduled jobs, event-driven architectures

Databases & Data Storage

- **Relational Databases:** PostgreSQL, MySQL, SQLite, database design, query optimization, indexing
- **NoSQL Databases:** MongoDB, Redis, Firebase, Airtable, document stores, caching strategies
- **Vector Databases:** Qdrant, Pinecone, Weaviate, Milvus, embedding storage, similarity search

Frontend & Full-Stack Development

- **JavaScript/TypeScript:** React.js, Next.js, Node.js, Express.js, responsive design, state management
- **Data Visualization:** Chart.js, Plotly, D3.js, Streamlit dashboards, interactive analytics

DevOps & Cloud Infrastructure

- **Containerization & Deployment:** Docker, Docker Compose, CI/CD (GitHub Actions), serverless
- **Cloud Platforms:** Azure (Storage, Functions), AWS (EC2, S3, Lambda), Linux administration

PROFESSIONAL EXPERIENCE

ABC Teknology | Ottawa, Canada · Remote
AI Engineer & Senior Web Scraping Developer (Part-time) | Jan 2026 - Present

Part-time contract alongside my full-time StechAI role.

- Designed and developed a production AI shopping assistant for UAE grocery price comparison, using a FastAPI backend and LangGraph agent architecture to interpret natural-language shopping requests, search retailers in parallel, filter results, and rank products by relevance and value.
- Built parallel web-crawling and data-ingestion services for major UAE grocery retailers, supporting live product, price, availability, and catalog data for AI-powered shopping workflows.
- Developed a cross-platform React Native / Expo mobile application for iOS and Android with TypeScript, multi-provider OAuth, secure session management, and real-time backend communication.
- Extended the same AI backend to WhatsApp, enabling users to interact with the shopping assistant through multiple channels using Twilio.
- Implemented LLM-driven product ranking, availability filtering, relevance filtering, live progress streaming, and multi-step agent orchestration using LangGraph and OpenAI.
- Designed backend services with PostgreSQL and Redis for persistent data, caching, session management, and scalable request handling.
- Worked across AI architecture, backend APIs, web scraping, mobile development, authentication, integrations, and production deployment.

StechAI | Lahore, Pakistan
Technical Full Stack AI Engineer | Jul 2025 - Present

Full-time at a services company. One client at a time, in this order: Turing, Sila Insights, Hyly, then TheSixth.AI.

TheSixth.AI | Technical Full Stack AI Engineer · current

- Marketing-research product for brands. Built the analytics and statistics dashboard on social data.
- Generated trends from that social data.
- Built AI assistants that answer from a knowledge base and a live database through live tool calls.

Hyly | AI Researcher · short engagement

- Worked with the team lead to extract statistics from Google Ads data.
- Presented the findings. The team built the product from that research.

Sila Insights | Data Scientist

- Described source data and produced the statistics the team used.
- Built the TrendGen pipeline: trends predicted from social posts, and emerging trends from those posts, current trends, and a large knowledge base.
- Built Prefect ETL pipelines for that processing, including embeddings, topic modelling, LLM-assisted trend naming, asynchronous jobs, and the admin console.

Turing | Data Annotation

- Completed assigned data-annotation projects with the StechAI team.

Freelance | Remote
Independent AI Consultant | 2023 - Present

- Designed and delivered production AI, automation, CRM, marketing, conversational AI, and full-stack products for international clients across service, sales, marketing, and technology use cases.
- Built Tap Connect, a production digital identity and networking platform using Next.js, FastAPI, PostgreSQL, Redis, HubSpot, NFC, and QR workflows, including live profiles, card management, connection capture, analytics, team governance, and CRM integrations.
- Developed Communication AI Hub, a production CRM and communications operations platform integrating lead intake, automated nurture flows, email, SMS, voice, call review, inbound AI agents, human review queues, and CRM workflows.
- Built Marketing AI Hub, a multi-brand content and advertising platform that transforms field videos into AI-generated social content, campaigns, organic posts, and Meta advertising workflows with human approval and brand controls.
- Designed and deployed AI voice agents and omnichannel booking systems using VAPI, OpenAI, Twilio, FastAPI, n8n, and Airtable for automated phone, SMS, and web booking.
- Developed intelligent document-processing and knowledge systems using RAG, vector databases, LLMs, and MCP-based agent workflows for automated extraction, retrieval, validation, and reporting.
- Built full-stack AI applications combining Python/FastAPI backends with React, Next.js, and React Native frontends, integrating third-party APIs, automation platforms, databases, and cloud services.
- Worked directly with international clients on architecture, technical planning, implementation, integrations, debugging, deployment, and production optimization.

KEY AI PROJECTS

AI Shopping Assistant | Agentic AI
Python, FastAPI, LangGraph, OpenAI GPT-4o, React Native, Expo, TypeScript, PostgreSQL, Redis, Twilio

- Built a conversational grocery price-comparison assistant for the UAE supporting iOS, Android, and WhatsApp.
- Designed a multi-step LangGraph agent that interprets natural-language shopping requests, searches four major retailers in parallel, filters unavailable or off-topic products, and ranks the best matching products.
- Implemented parallel crawling, LLM-driven product ranking, live progress streaming, persistent sessions, and multi-channel delivery through a shared FastAPI backend.

TheSixth.AI Assistants and Social Analytics | Agentic AI
Social analytics, trend generation, knowledge base, live database, tool-calling assistants

- Built an analytics and statistics dashboard over social data for a marketing-research product used by brands.
- Generated trends from that social data and shipped AI assistants that answer from a knowledge base and a live database through live tool calls.

TrendGen for Sila Insights | ML / NLP
Python, Prefect, FastAPI, BERTopic, Sentence Transformers, MongoDB, Qdrant, OpenAI, React, TypeScript

- As data scientist, described the source data, produced the statistics, and built the pipeline that predicts trends from social posts.
- Produced emerging trends from posts, current trends, and a large knowledge base, with Prefect ETL pipelines for the data processing.
- Shipped embeddings, topic modelling, LLM-assisted trend naming, asynchronous jobs, and an admin console for generation, monitoring, and analysis.

AI Voice Agent & Booking Automation | Conversational AI
VAPI, OpenAI, Twilio, FastAPI, n8n, Airtable, Next.js

- Built an always-on conversational booking system handling phone, SMS, and web interactions.
- Implemented real-time availability checks, stateful booking flows, Airtable synchronization, and human handoff for edge cases.
- Optimized conversational turn-taking and backend orchestration for responsive interactions.

EDUCATION

BSc Computer Science
Arid Agriculture University, Rawalpindi | 2021 - 2025

- Gold Medalist | Merit-Based Scholarship
- Relevant Coursework: Artificial Intelligence, Machine Learning, Data Structures & Algorithms, Databases, Software Engineering, Distributed Systems, NLP

ADDITIONAL INFORMATION

Languages

- English (Professional working proficiency), Urdu (Native)

Core Competencies

- End-to-end AI system development from data collection to production deployment
- RAG system architecture and vector database optimization for semantic search
- Agent orchestration and multi-step reasoning with LangChain and OpenClaw
- Production ML deployment with monitoring, A/B testing, and continuous improvement
- Remote collaboration with international teams across different time zones