Mudasser Tufail

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Profile

Software Consultant with **15+ years of experience** designing and delivering enterprise software across **FinTech, Banking, ERP, Climate, Cargo, and mobile/web platforms**. Strong hands-on background in **.NET/C#, JavaScript/TypeScript, React, React Native, Node.js, NestJS, SQL and AWS**.

Currently focused on **Generative AI and Agentic AI**, building workflow-driven systems using **LLMs, RAG, AI developer toolkit like OpenAI Agents SDK, Claude Agent SDK, MCP, LangChain, AI agents, structured outputs, tool calling, guardrails, and AI-assisted development**. Hands-on experience includes voice **AI/STT-TTS** platforms, **Intelligent Document Processing**, **Incident Intelligence, Code Support/Fix Agents**, and **reusable RAG infrastructure**.

Strong background in **software architecture, technical leadership, requirements analysis, client communication, project delivery, mentoring, and Agile/Scrum**.This experience is further enriched by **international work exposure** gained to work in countries such as **China, Malaysia, and Australia.**

Technical Skills

Languages: .Net, .Net Core, C#, ASP.Net, ADO.Net, NodeJS, NestJS, TypeScript, Angular, React, React Native, MEAN, MERN, TypeORM

DataBases: SQL Server, PostgresSQL, MongoDB

AI & Agentic AI: LLMs, RAG, AI Agents, OpenAI Agents SDK, Claude Agent SDK, MCP, LangChain, Prompt Engineering, Structured Outputs, Tool Calling, Guardrails, LLM Evaluation, AI-Assisted Development, Vibe Coding

Voice AI: STT, TTS, OpenAI Whisper, Deepgram, ElevenLabs, Amazon Transcribe, Google Speech-to-Text, Alibaba FunASR

AI Platforms & Tools: Cursor, Claude Code, GitHub Copilot

Cloud : AWS Cognito, SQS, Lambda, S3, CloudWatch, ECS, EC2

Architecture & Technologies:REST, GraphQL, Clean Architecture, Dependency Injection, Microservices, RLS, PostGIS

Project Management: JIRA (Bug tracking, Dash-Boards, Task Management, Monitoring), Linear (Bug Tracking, Dash-Boards), Clickup (Task Management)

Experience

Mavric — **Feb 2022 – Present**

Software Consultant — Lahore,Pakistan

- **Agentic AI / Voice AI Platform** : building reusable AI capabilities for **Speech-to-Text (STT)** and **Text-to-Speech (TTS)**.
    - Designed a dynamic provider architecture where users can select the AI engine for each run.
    - STT providers include **OpenAI Whisper, Deepgram, ElevenLabs, Amazon Transcribe, Google Speech-to-Text, and Alibaba FunASR**.

    - Supports both **live microphone/streaming input and file upload** workflows.
    - Produces transcripts that can be used for **meeting notes, call review, interviews/research, subtitles/captions, accessibility, narration, and other voice-enabled workflows**.
    - Designed the capability to compare outputs across different AI engines without changing the consuming application.
- **Generic RAG Ingestion & Retrieval Platform** : built a reusable RAG platform that can be consumed by multiple applications.
    - **Asynchronous, idempotent ingestion worker:** extract → chunk → embed → upsert.
    - **PostgreSQL + pgvector** used as a unified store for metadata, vector search, and keyword search.
    - **LangChain** used for document processing/chunking and embedding workflows.
    - Retrieval API performs query embedding, metadata filtering, and returns **cited chunks** for application-level RAG.
    - Multi-tenant design with tenant/application scoping to isolate data across organizations.
    - Designed as a lightweight shared capability so individual applications do not need to build and maintain their own RAG infrastructure.
- **Incident Intelligence & Code Support Platform** : developing an Agentic AI platform that automatically **triages production incidents, investigates code-level issues, and proposes validated fixes**.
    - Integrates with **Slack and Sentry**; uses LLMs to analyze alerts, identify genuine incidents, and initiate automated investigation.
    - **Code Support Agent (CSA)** uses ephemeral sandboxes, repository analysis, RAG-based project context, and Agentic AI workflows to identify root causes and propose fixes.
    - Applies **tool calling, structured outputs, deterministic guardrails, validation, and human-in-the-loop approval** to ensure safe AI actions.
    - Automatically creates **GitHub Pull Requests** when a validated fix is produced; otherwise generates a structured investigation report for engineers.
    - Includes an Admin Panel for managing organizations, projects, repositories, documentation, and approved AI context, backed by a reusable **RAG Platform**.
- Leading the **climate solution** project which focus on environmental issues and engage users to take adequate actions to get advanced climate solutions
    - Frontend is developed in **React-Native**(for Android and IOS)
    - Backend is developed in **Nest JS** using the **TypeORM**
    - **Graphql** layer is introduced to communicate from the backend to Frontend
    - Admin panel is designed in the React
    - **Postgres** database advanced feature are used like table level security, row level security for the permission system to secure the data
    - Utilized **AI Cursor** to significantly accelerate the development workflow using the **vibe coding** and **prompt engineering**, while leveraging a **MCP** strategy and the source **Figma design files** to ensure high fidelity and efficiency throughout the implementation process. Also utilizing AI-powered software development, working with **LLM**, **Open AI Agent SDK** tool, **Prompt Engineering**, and **Agentic AI** frameworks to build intelligent, workflow-driven applications.
- Worked on NFT based project using the **.NetCore**,**AngularJS**, **MongoDB**, **GraphQL**, **AWS Cloud Computing**(Cognito,SQS, Lambda, CloudWatch, Grafana) ,OpenSea API

NetSol Technologies, Inc(NasdaqCM: NTWK) **Feb 2014 – Jan 2022**

System Analyst / Application Specialist & Team Lead Lahore,Pakistan

- Working on state of the art world best financial software (NetSol Financial Suite - NFS). NFS has N-Tier and MVVM Architecture and SOA Platform developed in **.NET** Framework using **C#, .NET, WPF, WCF**
- Job Description
    - Translated business requirements into **technical designs, architecture, functional specifications and database solutions**.
    - Led product development by **coordinating teams, assigning tasks, resolving issues and ensuring timely delivery**.
    - Provided **technical leadership, coding guidance, client communication and Scrum Master support**.

Hitch GSM **Sep 2013 – Jan 2014**

Senior Software Engineer & Team Lead Lahore,Pakistan

- Development of GSM projects and worked on web portals

I-Xeon MSC Sdn. Bhd (Malaysia) ™ **Aug 2013 – Sep 2013**

Senior Software Engineer Malacca, Malaysia

- Development of the Sport Management System RFC. Automation of sports complex lighting system with the Current SAMS(Sports Administration and management system)

Comsoft Computer Consultants ® **Nov 2008 – Jul 2013**

Senior Software Engineer Lahore, Pakistan

- Developed **Cargo Management ERP and Banking applications** using **.NET/C#, WPF, WCF, ASP.NET, Silverlight, NHibernate, jQuery and SQL Server**, covering Operations, Job Processing, Accounting/MIS and Warehouse, with **Air Freight and Sea Freight** workflows aligned with **IATA/FIATA standards** and EDI integration.

- Worked on FinTech Industry Software (**POS**, **Mobile** banking, **ATM** Performance Monitoring) (**ISO8583**, **NDC+**)
    - Developed **POS, Mobile Banking and ATM monitoring solutions** using **ISO8583 and NDC+**, including transaction processing, network monitoring and performance analysis.
    - Developed **Early Fraud Detection, ATM alerting and Cash Management modules**, providing automated fraud detection, device-status monitoring, cash tracking and email/SMS alerts.

Brill Sol ® **Feb 2008 – Nov 2008**

Software Engineer Lahore, Pakistan

- Developed **desktop and web applications using .NET/C# and SQL Server**, including **DevExpress**, and

worked on **Construction ERP, CRM, and Oil & Gas projects** for international clients.

Academics

- **MSc Information Technology** — Punjab University College of Information Technology, 2007
- **Bachelor of Computer Science** — University of Balochistan, 2004

ProfessionalCourses

- Scrum for Professionals
- .Net Fundamentals
- .Advance .Net
- Object Orientated Programming using Java and .Net
- Web Application Development

Achievement

- Employee of the year award
- Client Performance Recognition

Personal Skills

- Flexible and quick learner
- Leadership
- Good Analytical Skills
- R & D Skill