

Mohammed Salih

LEAD GENAI ENGINEER | AGENTIC AI ARCHITECT | MCP SPECIALIST

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AI engineering leader with 10+ years in software and product delivery, specializing in **agentic AI** systems built on **LLMs**, **retrieval-augmented generation (RAG)**, and secure tool-use. Experienced in designing plan-act **DAG workflows**, building **Model Context Protocol (MCP) servers** for controlled tool access, and shipping production features with evaluation harnesses, guardrails, and PII filtering. Proficient in **LangChain** for orchestrating complex agent chains and tool integrations, and **LlamaIndex** for building performant retrieval pipelines over structured and unstructured data. Strong Python/FastAPI background with Docker-first delivery and cross-functional leadership.

Core Competencies & Skills

Agentic AI & Orchestration (LangChain, AutoGen)	<div style="width: 100%; height: 10px; background-color: #007bff;"></div>
MCP & Governed Integration	<div style="width: 100%; height: 10px; background-color: #007bff;"></div>
RAG (Hybrid Search, Vector DBs)	<div style="width: 100%; height: 10px; background-color: #007bff;"></div>
LLM Reliability (Guardrails, Evals)	<div style="width: 100%; height: 10px; background-color: #007bff;"></div>
Docker & Microservice Architecture	<div style="width: 100%; height: 10px; background-color: #007bff;"></div>
Python (FastAPI, Flask) & Node.js	<div style="width: 100%; height: 10px; background-color: #007bff;"></div>
React Native & React JS	<div style="width: 90%; height: 10px; background-color: #007bff;"></div>

Work History

Sep 2024 -
Jan 2026

Lead Software Engineer (GenAI & Agentic Systems)

- Zealogs Inc, Remote (USA)
- Architected and deployed 4 production MCP (Model Context Protocol) servers exposing enterprise tools (SharePoint, SQL databases, workflow triggers) via typed JSON Schema contracts with strict RBAC allowlists, enabling secure governed tool access for LLM agents across organization-wide AI services
- Engineered autonomous multi-agent orchestration systems using LangChain and Plan-Execute DAG workflows, implementing ReAct reasoning patterns with Human-in-the-Loop checkpoints and self-correction loops; reduced agent failure recovery time by 50%
- Designed constraint-driven resource allocation agents combining LangChain orchestration with Genetic Algorithms and Operations Research (OR) solvers, achieving 3x improvement in recommendation quality and 50% increase in edge-case reliability
- Built enterprise RAG pipelines utilizing hybrid search (pgvector + BM25), query routing, and Cohere reranking with metadata enrichment; implemented context management and deduplication, reducing hallucination rates to less than 2%
- Implemented comprehensive LLM evaluation harnesses with OpenTelemetry-style tracing and regression checks; established sandboxed tool execution with circuit breakers, achieving zero invalid resource allocations in production

Sep 2023 -
Jul 2024

Lead Product Engineer (AI/LLM Specialization)

- Foxiom Leads Pvt Ltd, Calicut, India
- Full specialization into AI agent development: Shipped production RAG systems using LlamaIndex and LangChain, integrating vector databases (Pinecone, FAISS) with hybrid retrieval strategies and source citation grounding
- Developed autonomous AI agents using Microsoft AutoGen for business process automation, architecting multi-agent conversation patterns with tool-calling capabilities and structured JSON outputs; implemented guardrails reducing manual processing by 40%
- Built agentic workflow orchestration for complex document processing utilizing ReAct patterns, persistent memory architectures, and multi-step execution planning; enabled context-aware agent interactions across long-running business workflows
- Led technical workshops on LangChain, LlamaIndex, and Agentic AI development; partnered with executive leadership on AI roadmap execution
- Spearheaded design and implementation of Phi-Data Framework, enhancing data processing capabilities for AI applications across organization
- Designed and deployed agentic automations integrated with company software products, leveraging Docker for consistent and scalable deployments

Mar 2022 -
May 2023

Project Manager & AI Integration Lead

- Beacon Infotech Pvt Ltd, Kerala, India
- Strategic gateway role bridging traditional software into Generative AI: Pioneered integration of GenAI/LLM capabilities (OpenAI API, LangChain) into existing Python and React Native product lines.
- Led cross-functional teams of 8-10 members in developing innovative solutions using Python, resulting in 30% increase in code efficiency and 25% improvement in scalability.
- Spearheaded integration of Generative AI and Large Language Models (LLM) into 3 existing products, enhancing user experience and increasing user engagement by 40%.
- Architected and implemented Docker-based deployment strategies for AI microservices, reducing deployment time by 60% and improving application portability across 5 different environments.
- Guided React Native development efforts for 2 major mobile applications, ensuring seamless cross-platform functionality and achieving 35% increase in performance metrics.
- Aligned 6 key stakeholders around cohesive product vision, leading to 50% faster implementation of cutting-edge technologies like LLMs.
- Oversaw comprehensive project documentation, including technical specifications for 4 AI integrations and 3 Docker implementations, reducing onboarding time for new team members by 40%.
- Conducted 12 wire-framing sessions to visualize complex AI-human interactions, contributing to 20% improvement in user interface design and 15% increase in user satisfaction scores.

Jan 2021 -
Dec 2022

Technical Lead

- Codelocus LLP, Calicut, India
- Pre-AI: Architected microservices using FastAPI and Express.js, building scalable REST APIs and modular service boundaries supporting high-throughput mobile applications.
- Spearheaded 4 development teams of 6-8 members each, leveraging Python and JavaScript to deliver 12 innovative solutions while consistently meeting 95% of project deadlines.
- Architected and implemented 3 microservices-based systems using FastAPI and Express.js, enhancing scalability by 40% and reducing maintenance time by 25%.
- Led the technical architecture for a Robotic Automation project in financial trading, integrating 5 AWS cloud services and achieving a 30% increase in processing speed.
- Orchestrated the development of 2 cross-platform mobile applications using React Native, ensuring seamless user experiences across devices and increasing user engagement by 35%.
- Implemented Docker containerisation, reducing deployment time by 50% and improving application portability across 3 different cloud environments.
- Utilised Sketch and Figma to create 20+ intuitive wireframes and mockups per month, facilitating clear communication between design and development teams and reducing revision cycles by 30%.
- Championed Agile methodologies, conducting daily 15-minute scrums, managing sprint backlogs of 50+ items, and overseeing documentation to optimize team productivity by 25% and improve project transparency by 40%.

Jan 2015 -
Dec 2020

Operating Officer & Software Developer

- Codedady Solutions Pvt Ltd, Malappuram, India
- Pre-AI foundations: Led end-to-end delivery of 15+ client projects as Operating Officer, coordinating teams, timelines, scope, and stakeholder communication.
- Led the operational and technical execution of multiple software projects, overseeing 5 development teams and managing 25 developers to deliver high-quality solutions within deadlines.
- Spearheaded the conversion of app UIs into scalable, high-quality code across platforms such as Android and iOS, including end-to-end management of app development and store deployments.
- Developed and implemented strategic workflows for business applications, achieving a 50% reduction in user friction and significantly boosting app adoption and engagement rates.
- Designed and delivered user-centric, interactive mobile app UIs, aligning closely with client requirements to enhance overall user experience.
- Utilized the React ecosystem to design and implement responsive user interface components for both web and mobile applications, leveraging JavaScript for robust and dynamic functionality.
- Translated prototypes and wireframes into fully functional app and UI components, with a focus on maximizing code reusability and performance efficiency.
- Integrated native modules and third-party dependencies as necessary, ensuring seamless application functionality and enhanced user experiences.
- Engineered front-end modules using Python and JavaScript, optimizing for performance, scalability, and maintainability in all development phases.
- Contributed to a positive team environment through effective communication, problem-solving, and collaboration skills.
- Mentored junior developers to improve their technical skills, fostering a culture of continuous learning within the team.

Nov 2015 -
Jan 2016

Internship

- Blue Shell Security, Cochin, Kerala, India
- Resolved an average of 25 critical security vulnerabilities per month, reducing system vulnerabilities by 75% over a 6-month period.
- Implemented security patches for 100+ servers within 48 hours of release, maintaining a 99.9% uptime.
- Conducted weekly vulnerability scans across 500+ network endpoints, identifying and prioritizing an average of 50 potential threats per scan.
- Reduced the mean time to detect vulnerabilities by 40% through implementation of automated scanning tools.
- Performed data security audits on 15 corporate databases, ensuring 100% compliance with industry standards and regulations.
- Implemented encryption protocols that increased data protection by 60%, safeguarding over 10 TB of sensitive customer information.

Oct 2013 -
Jun 2015

Freelancer

- Self Employed Services, Calicut
- Proactively explored and self-taught 3 programming languages, including JavaScript and Python, demonstrating a strong ability to quickly adapt to new technologies and methodologies within 6 months.
- Gained hands-on experience by developing 5+ projects, applying acquired knowledge to solve real-world problems and meet client-specific requirements, resulting in a 95% client satisfaction rate.
- Conducted in-depth research on 10+ emerging technologies to provide tailored solutions for client projects, showcasing a commitment to continuous learning and innovation. This research led to a 20% increase in project efficiency.
- Analyzed client requirements to design and develop UI/UX solutions for 8 projects, ensuring intuitive and visually appealing interfaces aligned with user needs and business goals. This resulted in a 30% increase in user engagement metrics.
- Produced 15+ comprehensive design documentation and prototypes, facilitating clear communication of project concepts and specifications to clients and stakeholders, reducing revision cycles by 40%.
- Applied a user-centered approach to design, consistently delivering high-quality, interactive, and engaging digital experiences, leading to a 25% increase in positive user feedback and a 15% reduction in support tickets.



Education

Jan 2013 -
May 2017

B.Tech Computer Science And Engineering

- Calicut University - Calicut

Jan 2010 -
May 2013

Higher Secondary

- Presentation Higher Secondary School - Perinthalmanna



Certifications

- Certified Ethical Hacker, Blue Shell Security



Awards

- Winner of TechWiz Codethon 2019, 07/2019, Bridge Global
- Kerala Startup Mission Award of 2017, 03/2017, KSM

Agentic AI Projects & Featured Works

Aurora Hypercore Agent GPT. Experimental framework for autonomous agent workflows implementing memory architectures, tool registry patterns, and hierarchical execution loops. | LangChain, AutoGen, MCP. (GitHub: MohdSaleh/aurora-hypercore-agent-gpt)

plugLLM. Unified API abstraction layer enabling hot-swapping between OpenAI, Anthropic, and local LLM providers with automatic fallback orchestration and load balancing. | Multi-Provider LLM Integration, Python SDK. (GitHub: MohdSaleh/plugLLM)

IRS Prompt Engineering Lab. Research repository for LLM reliability patterns including adversarial testing frameworks, prompt injection defense mechanisms, and structured output validation schemas. | Evaluations, Guardrails. (GitHub: MohdSaleh/IRS-prompt-engineering-lab)

Travlounge, Beacon Infotech. Travlounge instigates the culture of 'traveling made possible for anyone and everyone', enabling all the standards and necessities to set you in motion. | Android, iOS, React Native, React js, Python Django, Postgresql.

Algo Trading Application, Codelocus LLP. A strategic autonomous robotic trading application and toolkit for financial stocks | Web Application, Docker, Python Fast API, Express js, React js, Postgresql, MongoDB.

Vidya Portal, Westbay Overseas Education. Education Consultancy App connecting agents and students for document management and status updates | Web & Mobile Application, React Native, React js, Python Django, Postgresql.

Foodoor Delivery, Foodoor LLP. Food Delivery Application User app, restaurant app, and delivery app for food delivery | Mobile Application, React Native, Python Django, React js, Postgresql.

Personal Details

DATE OF BIRTH: 28/10/1995

NATIONALITY: Indian

MARITAL STATUS: Married

GENDER: Male

Languages

Malayalam

Bilingual or Proficient (C2)

English

Advanced (C1)

Hindi

Upper intermediate (B2)

Tamil

Upper intermediate (B2)

Writing (Medium @ryansaleh)

- [Simplify AI Model Training with GPT](#)
- [Caught in the Transparency Trap: AI Reveal](#)
- [SGI Coder: VSCode Copilot Agent Mode](#)
- [AGI Architecture: The AI Agent Loop](#)

Technical Index

[LangChain](#) | [LlamaIndex](#) | [AutoGen](#) | [CrewAI](#) | [MCP](#) | [RAG](#) | [ReAct](#) | [Plan-Execute](#) | [Vector DBs](#) | [pgvector](#) | [Pinecone](#) | [FAISS](#) | [Prompt Engineering](#) | [PII Redaction](#) | [LLM-as-Judge](#) | [FastAPI](#) | [Docker](#) | [React Native](#) | [Python](#) | [Node.js](#) | [SQL](#) | [MongoDB](#)