Shahul Hameed Ummarali

Solutions & AI Systems Architect | Cloud, Microservices & Generative AI | Healthcare & Financial Services

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PROFESSIONAL SUMMARY

Solutions architect with 20 years of software engineering experience designing and delivering large, highly integrated platforms for leading U.S. healthcare and financial services organizations. Currently the solutions architect for a U.S. health plan's market-facing portals portfolio – member, provider, employer and broker portals (2M+ users), leading digital transformation, cloud migration and a 400+ microservice event-driven platform on Azure. Hands-on coder who takes solutions from requirements through production, including an Azure OpenAI document automation solution for the same health plan; builds Generative AI applications with Spring AI, LangChain, LangGraph and LLM APIs. Leads distributed Agile and Waterfall teams of up to 40 engineers across India, Canada and the United States, hiring and mentoring engineers and working with business stakeholders across regions.

CORE COMPETENCIES

Architecture: End-to-end solution design, event-driven microservices, cloud migration (AWS, Azure), web application modernization, API strategy, scalable design principles

Generative AI: LLM-based application development, OCR and intelligent document processing, Spring AI, LangChain, LangGraph, machine learning, data analysis and visualization

Leadership: Technical program management, distributed delivery across India, Canada and the U.S. (onsite, near-site and offshore), risk management, hiring, mentoring and performance evaluation, continuous process improvement

Domains: Healthcare payer (member, provider, employer and broker portals), mortgage-backed securities, corporate banking, credit bureau, regulatory reporting

TECHNICAL SKILLS

Languages & Frameworks: Java, Spring Framework, Spring Boot, Spring Integration, Spring AI, Python, Node.js, TypeScript, Angular, REST web services

Cloud & DevOps: Amazon Web Services (AWS), Microsoft Azure, Docker, Kubernetes, Jenkins CI/CD, GitHub

Integration & APIs: Apache Kafka, Apigee, Azure API Management

Data: Oracle, PostgreSQL, SQL Server

AI & Data Science: Generative AI, Azure OpenAI, LLM application development, LangChain, LangGraph, Scikit-learn, NumPy, Pandas, SciPy, Matplotlib, Seaborn

PROFESSIONAL EXPERIENCE

Cognizant Technology Solutions

07/2012 – Present

Senior Software Architect

United States, Canada & India

Solutions Architect | U.S. Health Plan

07/2020 – Present

Remote from Mississauga, ON

Regional U.S. health insurance plan; member, provider, employer and broker portals.

- Own end-to-end architecture for a portal portfolio serving more than 2 million users, turning business requirements gathered with stakeholders into technical designs and leading delivery through the full development lifecycle.
- Designed and delivered large-scale digital transformation and cloud migration programs, moving portal applications to a platform of 400+ microservices on Azure.
- Designed and delivered a Generative AI document-processing solution that uses OCR and Azure OpenAI to read employer group PDF documents, extract group-level details and required actions (such as group termination), and invoke downstream APIs to process those actions automatically.

- Set technology strategy and architectural standards for the portfolio, promoting scalable design principles and engineering best practices across teams.
- Plan and run multi-team programs end to end, identifying delivery and technical risks early and putting mitigation plans in place.
- Lead a 40-person engineering team across India, Canada and the United States, coordinating delivery across time zones, including hiring, mentoring and performance evaluations.

Software Architect | U.S. Mortgage Finance Client 06/2018 – 06/2020

United States

U.S. mortgage finance company that issues mortgage-backed securities (MBS).

- Architected a modern digital platform for the client's next-generation bond offerings, automating the full bond offer processing and reporting workflow.
- Translated business requirements into the target architecture, set design standards, and owned the solution and its risk mitigation from design through delivery.
- Managed the project plan and the engineering team, including hiring, mentoring and performance evaluations.

Lead Developer | U.S. Health Plan 07/2012 – 05/2018

Chennai, India & United States

- Led the development team delivering multiple projects across the same health plan's member, provider, employer and broker portals.
- Designed and built portal features with business and technical stakeholders; mentored developers and conducted performance evaluations.

Royal Bank of Scotland (RBS) **07/2010 – 06/2012**

Software Engineer *Chennai, India*

- Designed and developed Online Client Services (OCS), a self-service portal for RBS corporate clients to view accounts, contracts, transactions and balances and to raise service requests.
- Worked with business and technical stakeholders on requirements and provided production support.

Capgemini **02/2006 – 06/2010**

Associate Consultant *Norway & India*

- **Norwegian credit information company (Oslo, Norway):** Developed the next-generation Credit Bureau System (CBS): credit source file processing, administrator and identity web applications, and the main credit viewing application; performed integration testing and production support.
- **Global investment bank (Pune, India):** Developed the Global Regulatory Reporting System (GRRS), monitoring enterprise-wide regulatory compliance and positions, and a historical position data mart feeding multiple regulatory reports; performed integration testing and production support.

SELECTED PROJECTS

Healthcare Payer AI Portfolio | Next.js, TypeScript, Java 21, Spring Boot, Claude API shahulnu.dev | GitHub

- Built five working Generative AI applications for the healthcare payer domain: prior authorization copilot, denial appeals assistant, benefits navigator, payment integrity radar and HCC risk-adjustment evidence finder.
- Deterministic code makes every decision (rules, thresholds, money math, codes) while the LLM reads and explains; every quoted source is verified word for word before output is shown.
- Engines implemented in both TypeScript and Spring Boot (Java 21) services, kept in sync with contract tests; uses CMS-0057-F deadlines, X12 835 CARC/RARC codes and CMS-HCC V28.

EDUCATION & CERTIFICATIONS

Post Graduate Program in Artificial Intelligence and Machine Learning Purdue University

Bachelor of Technology, Computer Science and Engineering Calicut University

Claude Certified Architect – Foundations Anthropic

Microsoft Certified: Azure Fundamentals Microsoft

Generative AI Overview for Project Managers Project Management Institute (PMI)