AKASH SHANMUGANATHAN

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PROFESSIONAL SUMMARY

AWS Certified AI Engineer and Full-Stack AI Product Builder with 4+ years of experience shipping production AI systems in startup environments. Expert in end-to-end product ownership from ideation to deployment: solutions architecture, hands-on engineering, and client presentations. Built production-grade multi-agent systems and speech-to-speech conversational AI using AWS Bedrock and Claude 4.5, delivering 10x operational efficiency gains. Currently leading Healthcare RCM AI product development featuring an AI chatbot powered by MedGemma for clinical NLP and Smart on FHIR interoperability. Proven ability to work with cross-functional teams, translate complex AI capabilities into business value, and land enterprise contracts through compelling technical demonstrations.

CERTIFICATIONS

- AWS Certified Data Engineer – Associate (DEA-C01)   AWS Certified Solutions Architect – Associate (In Progress)

TECHNICAL SKILLS

AI Engineering: AWS Bedrock (Agents, Knowledge Bases, Guardrails), Claude 4.5, MedGemma, Nova Sonic, Conversational AI, AI Chatbots, LangChain, Multi-Agent Orchestration, Agentic AI, MCP, RAG, Prompt Engineering, Evaluation Frameworks, Vector Databases
Healthcare AI: MedGemma AI Chatbot, Smart on FHIR, HL7 FHIR Interoperability, HIPAA Compliance, Healthcare RCM, Clinical NLP
Cloud: AWS Lambda, Step Functions, EventBridge, S3, DynamoDB, RDS, Glue, CloudWatch, IAM, Serverless Architecture, CI/CD, Docker
Programming & Tools: Python, JavaScript, TypeScript, Node.js, SQL, PySpark, React, Claude Code, Replit, Kiro, AI-Assisted Development
Product & Business: Product Management, Roadmapping, Agile/Scrum, Stakeholder Alignment, Client Presentations, Responsible AI

PROFESSIONAL EXPERIENCE

AI Engineer - AI Product Development & Strategy | Onedata Software Solutions, Fort Mill, SC, US   **Sep 2025 – Present**

Healthcare RCM AI Platform with MedGemma Chatbot (0-to-1 Product Development)
- Leading full product lifecycle for Healthcare Revenue Cycle Management AI: conducting competitive analysis against Epic, Waystar, and Cerner, defining product strategy, and building business cases for stakeholder buy-in
- Building AI chatbot powered by Google MedGemma for clinical NLP capabilities: medical entity extraction, clinical reasoning, claims assistance, and healthcare-specific conversational AI to differentiate from rule-based competitors
- Architecting Smart on FHIR implementation enabling interoperability with any EHR system, designing API-first architecture for seamless healthcare data exchange and integration across provider networks
- Developing using Claude Code and Replit for rapid prototyping and iteration, championing AI-assisted development tools across engineering team to accelerate time-to-production by 40%
- Driving ideation-to-deployment workflow: pitch ideas, validate with POCs, conduct stakeholder demos, define roadmap, develop features, test, and deploy to production

Speech-to-Speech Conversational Analytics Platform for MarTech (Enterprise Client Delivery)
- Architected and built 4-agent orchestration system (Query Planner, Data Retriever, Insight Generator, Visualizer) using AWS Bedrock Multi-Agent Collaboration with Claude Haiku 4.5, achieving 85% autonomous accuracy for marketing analytics
- Engineered speech-to-speech conversational AI interface with Amazon Nova Sonic, implementing bi-directional real-time audio streaming via SocketIO achieving sub-800ms latency for hands-free natural language marketing analytics
- Built Model Context Protocol (MCP) server with 5 specialized tools for autonomous schema discovery, SQL generation, and semantic retrieval with enterprise data governance and responsible AI practices
- Implemented enterprise RAG architecture with Bedrock Titan Embeddings, reducing hallucinations by 75% through semantic grounding; built evaluation frameworks to measure accuracy, latency, and hallucination rates
- Lead technical consultant for enterprise MarTech engagements: conducting discovery sessions, developing POCs, delivering technical demos, and translating AI architectures into quantifiable ROI for C-suite stakeholders

Software Engineer - Data Engineering & Client Delivery | Hexaware Technologies, Chennai, India   **Jan 2021 – Jul 2023**
- Delivered $180K annual cost savings by migrating 200+ SQL workloads from on-premises MySQL to AWS (RDS, Glue, Redshift), achieving 30% cost reduction and 45% performance improvement through query optimization
- Built ML training data pipelines with automated feature engineering and data preprocessing workflows supporting financial forecasting predictive models for enterprise clients
- Created automated Tableau dashboards for 21 QA teams tracking metrics across 15+ projects; conducted 15+ client-facing technical presentations demonstrating cross-functional collaboration skills

EDUCATION

Master of Science in Engineering Management (AI Product Management)   **Sep 2023 – May 2025**
Northeastern University, *Boston, MA* | GPA: 3.75

Bachelor of Engineering in Electrical and Electronics Engineering   **Jun 2017 – May 2021**
Anna University, *Chennai, TN, India*