

Manimaran Selvan

Java Software Architect | Cloud & AI Expert | Technical Leader

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Experienced Software Architect with 16+ years of expertise in designing scalable cloud-native architectures, integrating AI solutions, and optimizing systems for performance and reliability. Proven track record in modernizing legacy systems, implementing innovative solutions, and delivering technologies that drive business value.

Skills

Programming Languages:

Java, Groovy, Python, JavaScript, TypeScript

Framework/Libraries:

Spring, Spring Boot, Node.js, Angular, React

Source, Build & CI/CD:

Git, Github, Bitbucket, GitLab, Gradle, Maven, Jenkins

Databases/Cache:

MySQL, PostgreSQL, MongoDB, DynamoDB, Redis, Memcache

Generative AI:

LangChain, LlamaIndex, GPT 3.5/4 APIs, Bedrock, FAISS, RAG, Fine-tuning, Prompt engineering

Architecture:

TOGAF, ArchiMate, UML, C4 Models, BPMN, ERD, ADR, Sparx Enterprise Architect, Microservices, Domain-Driven Design, Distributed Systems

AWS Services:

EC2, EBS, EFS, AMI, S3, IAM, VPC, API Gateway, ECS, EKS, Fargate, Lambda, AppSync, Amplify, Step Functions, Cost Explorer, Cost and Usage Reports (CUR), Cognito, CloudFormation, Cloudwatch, Cloudtrail, SNS, SES, SQS, RDS/Aurora, DocumentDB, DynamoDB, ElastiCache, OpenSearch, Quicksight

Soft skills:

Strategic Planning, Leadership & Team Collaboration, Agile & Lean Methodologies (Scrum, Kanban), Continuous Improvement, Product Vision & Mission, Vendor Management, Stakeholder Management, Change Management, Testing Methodologies, Decision Making, People Management, Coaching/Mentoring, Crossfunctional Collaboration, Conflict Resolution

Certification

AWS Certified Solutions Architect - Professional

Sep 27, 2024 – Sep 27, 2027

Validation Number: [e478210227fd46fdaccc48b5e403dba0](#)

Experience

IT Consultant (Software Architect)

Jul 2023 – Present

Pragya Consulting Services | Brussels, Belgium

On-site from Jul 2024 – Delivered innovative cloud and AI solutions, serving as a hands-on architect and technical expert. Focused on designing robust, scalable architectures and solving complex technical challenges.

- Designed and deployed scalable, cloud-native architectures on AWS, optimizing performance, fault tolerance, and cost-efficiency for diverse enterprise use cases.
- Developed AI-driven solutions utilizing LLaMA models, integrating them with custom retrieval-augmented generation (RAG) pipelines to enable intelligent, context-aware decision-making.
- Enhanced team productivity by introducing streamlined CI/CD workflows and ensuring alignment with Agile methodologies.
- Conducted code reviews, architecture validations, and cloud cost audits to ensure robust designs and operational efficiency.

Technical Product Manager (Software Architect)

Aug 2017 – Jun 2023

Trilogy Enterprises | Austin, Texas (Remote)

Led cost-saving initiatives, architected and developed CloudFix, and improved work allocation and delivery processes. Co-managed TPMs and spearheaded cutting-edge product development using modern AI technologies.

- Achieved \$15M savings in 3 months by developing CloudFix, leading to over \$100M in cumulative savings for customers.
- Designed and developed an AI-powered chatbot for CRM, leveraging LangChain, GPT-3.5 API, and RAG to deliver intelligent, context-aware conversational capabilities. Achieved a 75% improvement in customer interaction efficiency and significantly reduced support overhead.
- Implemented lean software assembly lines for efficient work delivery through well-defined work units and 24/7 operations for a global workforce of over 5K.
- Developed tools for specification ordering, search, ranking, and CTO boot camps using AWS technologies, reducing operational overhead by 75%.

Lead Software Engineer

Jan 2015 – Aug 2017

Trilogy Enterprises | Austin, Texas (Remote)

Centralized IT operations, managed senior SREs, automated processes, contributed to tools architecture and development, and handled M&A activities

- Centralized IT operations for a global workforce of 5K+, achieving 85% cost savings.
- Coached and managed 20+ senior SREs, enhancing their productivity by 4x.
- Authored M&A IT transition playbooks, integrating over 15 acquisitions.
- Implemented JIRA workflows and advanced automation, reducing operational overhead by 75%.
- Contributed to the development of VDI2, a web app for deploying AWS services with an audit trail, preceding AWS's comprehensive IAM and compliance features.

Technical Co-founder

Oct 2013 – Dec 2015

Tissow Technology Ventures | Chennai, India

Architected and developed Humingo, replatformed Ticketgoose, and optimized tech operations by switching cloud providers.

- Built Humingo, an e-commerce product discovery and aggregation platform, comprising a distributed crawler and product classifier, in 6 months using Cloudera Hadoop, Apache Solr, Lucene, HDFS, Zookeeper, and Kafka.
- Modernized Ticketgoose, a bus ticket booking platform, reducing operational complexity and improving user experience in 3 months using Spring framework.
- Reducing TCO by 50% by switching from AWS to Linode, and later moving back to AWS after the introduction of GP2 volumes.

Senior Associate

Dec 2011 – Oct 2013

Nallan Technology Ventures | Chennai, India

Architected and built Kachyng, a PCI-compliant mobile payments platform.

- Implemented single-click checkout, enhancing UX by reducing transaction time by 50%.
- Led the PCI compliance initiative, implementing encryption, tokenization, and rigorous security protocols to meet stringent security standards, successfully passing all compliance audits.

Technical Co-founder

Aug 2010 – Dec 2011

EMRG Software Solutions | Chennai, India

Led a 10-member team, architected, and developed 2 products in the financial information research space.

Systems Engineer & Java Application Developer

Aug 2008 – Aug 2010

YuMe | Chennai, India

Managed infrastructure and automated deployments across 6 environments, overseeing production deployments, migrations, and daily DevOps tasks. Conducted R&D in early mobile technologies, developed native apps, and created proof-of-concepts using Google Web Toolkit.

Education

B.Sc Computer Science

2008

Bharathidasan University | Trichy, India