

# Chamath Wanigasooriya

Senior Software Engineer

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## Professional Summary

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Senior Software Engineer advancing from Intern to Senior roles at CodeGen International by consistently solving complex infrastructure problems. Deeply interested in the intersection of AI and software engineering, specifically in building autonomous agents with LangGraph that interact with real-world enterprise systems. Proven ability to lead technical projects and mentor junior engineers, supported by a strong academic research background in Blockchain and Deep Reinforcement Learning. I am passionate about bridging the gap between theoretical research and production engineering to build resilient, scalable software solutions.

## Technical Skills

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**Cloud & Infra:** AWS (EC2, ECS, S3, CloudWatch), Kubernetes (K8s), Docker, RDS

**AI & ML:** LangGraph, Amazon Bedrock, MCP (Model Context Protocol), AI Agents, Reinforcement Learning (DQN)

**Languages:** Java, Python, SQL, TypeScript, JavaScript, Dart, Solidity

**Frameworks:** Spring Boot, Hibernate, Angular, Flutter

**DevOps & Tools:** GitLab CI/CD, Redis, SonarQube, Prometheus, Grafana, Elastic Search, Oracle

## Professional Experience

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### CodeGen International

Senior Software Engineer

Sri Lanka

July 2025–Present

- **AI-Driven Troubleshooting Agents:** Architected LangGraph Reactive Agents to automate system analysis and troubleshooting. Enabled agents to ingest Jira ticket details and autonomously diagnose technical issues.
- **MCP Implementation:** Built and deployed Model Context Protocol (MCP) servers to bridge AI agents with enterprise infrastructure, enabling secure, real-time context retrieval from Oracle, AWS, Elastic Search, and Prometheus.
- **Cloud Integration:** Leveraged standard AWS MCP servers to connect AI workflows with stored data in S3 and RDS, ensuring seamless information retrieval for agentic tasks.
- **Technical Leadership:** Leading technical design reviews, enforcing clean code standards, and mentoring junior engineers on SOA patterns and cloud security.

<b>CodeGen International</b>	<b>Sri Lanka</b>
<i>Software Engineer</i>	<i>July 2023–June 2025</i>
○ <b>Internal Developer Platform:</b> Engineered a unified web-based dashboard allowing teams to monitor environments and resolve SonarQube vulnerabilities efficiently.	
○ <b>Security Modernization:</b> Led the critical migration of identity management from SAML 1.0 to SAML 2.0, ensuring compliance with modern security standards and enabling seamless SSO.	
○ <b>Performance Optimization:</b> Implemented Redis distributed caching to offload heavy database reads, improving throughput for high-traffic endpoints.	
○ <b>Rapid Response Leadership:</b> Served as a core member of the Rapid Response Team, leading Root Cause Analysis (RCA) for critical production outages under strict SLAs.	
<b>CodeGen International</b>	<b>Sri Lanka</b>
<i>Associate Software Engineer</i>	<i>Jan 2023–July 2023</i>
○ <b>SOA Refactoring:</b> Decoupled resource-intensive batch processing jobs into dedicated services within a Service-Oriented Architecture (SOA), preventing main-thread blocking and improving fault tolerance.	
○ <b>Service Development:</b> Developed core business services using Spring Boot, ensuring seamless integration with third-party APIs.	
<b>CodeGen International</b>	<b>Sri Lanka</b>
<i>Software Engineering Intern</i>	<i>July 2022–Dec 2022</i>
○ Built the project's first Automated CI/CD pipeline using GitLab CI, replacing manual deployments with a one-click release process.	

## Publications & Research

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### 40th International Conference on Information Networking (ICOIN)

*NimbusGuard: Proactive Kubernetes Autoscaling Using Deep Q-Networks* 2026 (Accepted)  
*Master's Research.* Proposed and validated a Deep Q-Network (DQN) based autoscaler that outperforms standard Reactive AutoScalers (HPA) by reducing latency during sudden traffic bursts.

### 3rd International Conference for Emerging Technology (INCET) | IEEE Xplore

*Blockchain-based intellectual property management using smart contracts* 2022  
*Undergraduate Research.* Developed a decentralized solution for IP management using Ethereum smart contracts.  
 Cited by 8 publications.

## Education

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<b>University of Westminster</b>	<b>UK (via IIT Sri Lanka)</b>
<i>MSc in Advanced Software Engineering</i>	<i>Completed</i>
<i>Research Focus:</i> Proactive Kubernetes Autoscaling using Deep Q-Networks (DQN).	
<b>General Sir John Kotelawala Defence University (KDU)</b>	<b>Sri Lanka</b>
<i>BSc (Hons) Software Engineering</i>	<i>Completed</i>
<i>Capstone Project:</i> Decentralized Content Publication Platform (Ethereum/Solidity).	

## Honors & Certifications

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**2025: 2nd Runners Up – AWS Buildathon:** Recognized for excellence in cloud innovation and rapid prototyping on AWS.

**Cert: CCHRM:** Certificate Course in Human Resource Management (Personnel management, conflict resolution, and leadership).