

# Gracious Eluvathingal

Software Engineer – AI Automation, Backend & Cloud Systems

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## Summary

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AI-focused Software Engineer with experience building and delivering cloud-native backend services, AI agents, and n8n-based automation, including optimized CUDA-accelerated inference systems. Pursuing an M.S. in Robotics and Autonomous Systems, with hands-on experience in perception, control, and system integration. Proficient in Python, JavaScript, C++, AWS, and Linux, collaborating with cross-functional teams and clients to turn business processes into secure, scalable automation and AI workflows.

## Education

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**Master of Science in Robotics and Autonomous Systems** *Graduating May, 2026*  
*Arizona State University, Tempe, Arizona, United States*

**Bachelor of Engineering in Computer Science (Honors in Cybersecurity)** *May, 2024*  
*University of Mumbai, Mumbai, India*

## Skills

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**Languages:** Python, JavaScript, C++, SQL, Bash Scripting, PHP, HTML, CSS

**AI Automation & LLM Systems:** n8n workflows and automation, multi-agent LLM systems, AI-enhanced operations automation, CUDA-accelerated inference and analytics pipelines

**Backend & Integrations:** Node.js, Django, REST API integrations, data processing pipelines, real-time analytics, third-party API integrations (Twilio, LiveKit)

**DevOps & Cloud:** Docker, Kubernetes (k3s), GitHub Actions, Jenkins, CI/CD pipelines, release engineering, AWS (ECS, RDS, S3, SageMaker, Bedrock), Azure OpenAI

**Testing, Compliance & Automation:** API testing (JSON), static code analysis (SonarQube), HIPAA-compliant logging and audit trails, n8n workflows

**Systems & Networking:** Linux, Twilio, WebRTC, CUDA, ns-3, Mininet, SDN (Ryu controller)

**Tools & Process:** Git, GitLab, JIRA, PowerBI, Agile/Scrum methodology, sprint planning, incident response

## Experience

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**Software Developer, API & Security Specialist** *June 2025 – Present*  
*Allyzent LLC, Dallas, Texas, USA*

- Built 6+ CI/CD pipelines as automated test + deploy systems, reducing release time by 60%.
- Designed scalable REST APIs/microservices for multi-tenant chatbots and AI agents with WebRTC integration, supporting 5,000+ monthly active users.
- Re-designed AWS environments (ECS, RDS, S3) to scale, reducing infrastructure costs by 28%.
- Built internal tools and 50+ n8n workflows integrating Twilio, LiveKit, and other third-party APIs to automate routing, notifications, and operations data flows at scale.
- Configured A2P 10DLC for compliant B2B SMS campaign management enabling outreach to 100K+ users.
- Developed Static code audits using SonarQube, HIPAA-compliant logging & audit trails which increased compliance and stakeholder transparency by 40%.

**Product Manager, Healthcare Infrastructure & Automation** *June 2025 – Present*  
*Allyzent LLC, Dallas, Texas, USA*

- Managed 4 cross-functional teams (9+ engineers, designers, QA) in JIRA, leveraging n8n automation and AI-driven issue resolution to shorten release cycles and reduce manual effort during critical launches.
- Led incident response efforts, diagnosing and resolving production issues.
- Reduced feature delivery time by 22% through optimized sprint planning and backlog prioritization.

**Freelance Software Developer** *May 2022 – June 2024*  
*Upwork (Remote)*

- Delivered multiple products on Upwork as a freelance software developer.
- Built a client-facing counselling website for all age groups using React and Express.

- Developed a browser-automation application for a client to exercise end-to-end test flows and calendar-related automations.
- Developed a C++ application for a client, iterating based on feedback and requirements.
- Implemented a C++ project using CUDA for parallel processing to accelerate compute-heavy workloads and strengthen GPU programming skills.

### **Machine Learning Intern**

*Jan 2024 – May 2024*

*Inspira Enterprise (Project for Humans.ai), Mumbai, India*

- Built a multi-agent LLM system using a large action model (LAM) and JTBD framework to coordinate tools and services under real-time constraints.
- Optimized model inference latency by 35% by profiling bottlenecks, tuning the pipeline, and using CUDA acceleration on NVIDIA GPUs.
- Developed a real-time conversation analytics pipeline processing 10k+ daily interactions and collaborated with a 3-engineer team to improve reliability, reducing downtime by 12%.

## **Projects**

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### **AI-Enhanced Operations Automation Suite**

- Developed a n8n-based automation suite with AI monitoring to stream server uptime and DevOps events into Slack and Telegram, providing near real-time observability for operations.
- Automated Monday.com board updates to maintain live project status visibility and reduce manual tracking across engineering and product teams.
- Delivered a 40% reduction in manual reporting and improved response time to critical system events.

### **IEEE Research Paper: DDoS & Reinforcement Learning**

- Built a dynamic SDN-based network testbed in Mininet to simulate DDoS attacks and benign traffic flows.
- Implemented a reinforcement learning agent to detect and mitigate DDoS attack traffic using network-level features and a reward signal tied to service availability.
- Integrated with the Ryu SDN controller via northbound APIs to apply mitigation policies and throttle malicious flows in real time.

### **Cross Platform 2D Rendering Library**

- Developed a small cross-platform 2D rendering library in modern C++.
- Designed and implemented a minimal backend-agnostic rendering API (Renderer/IRenderBackend) with runtime-selectable OpenGL and Null backends.
- Focused on clean architecture using modern C++ patterns, basic tests, and concise documentation.

### **Home Kubernetes Lab (Raspberry Pi k3s Cluster)**

- Built a two-node Raspberry Pi cluster running k3s to self-host services on a home network.
- Deployed and managed containerized applications using `kubect1` and Kubernetes manifests.
- Configured SSH and network access for remote administration and routine maintenance of the cluster.