

# ABHIJITH SWAMINATHAN

## Software Engineer

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## Summary

Seasoned Software Engineer around 5 years' expertise in cloud-native architectures and distributed systems, specializing in Kubernetes orchestration, CI/CD automation, and full-stack development. Achieved 85% deployment efficiency gains and 45% faster issue resolution through scalable automation frameworks. Proficient in Python, Golang, Java and JavaScript, with Agile-driven cross-functional collaboration. Recently relocated to the UK, eager to leverage technical leadership in dynamic tech ecosystems to architect innovative, user-centric solutions.

## Experience

### Radisys

Bangalore, India

#### Senior Software Engineer

08/2020 - 12/2024

A telecom technology firm developing 5G/LTE infrastructure software and open-network solutions for global communications providers.

- Spearheaded end-to-end release management for parallel software versions across Testing, Validation, and Production environments, facilitating cross-functional collaboration between 10+ development and QA teams to resolve critical path issues within Agile/Scrum frameworks.
- Proactively identified and communicated potential release timeline risks to 10+ feature owners and senior stakeholders through Jira dashboards and weekly syncs, enabling data-driven corrective actions that reduced delivery delays by 60% across quarterly cycles.
- Headed system integration efforts using Python framework with a team of 4 for the FTTH/B project, automating broadband deployment across Kubernetes (K8s) clusters, K3s middleware, and broadband components up to ONT.
- Optimized Python automation scripts to replace a manual 2-day system bring-up process, reducing deployment time to 3 hours (85% efficiency gain).
- Integrated Python automation frameworks into DevOps CI/CD pipelines, establishing daily/weekly/release health reports and automated stakeholder updates.
- Orchestrated L3/L4 CI test pipelines across Kubernetes, K3s, and networking backbones, achieving 80% test coverage and 45% faster production issue resolution.
- Architected and launched two Golang microservices for a distributed monitoring system using Prometheus and Grafana for metrics/visualization.
- Diagnosed and resolved critical edge cases (race conditions, null payloads) in a JavaScript microservice via automated boundary testing (Jest/Cypress), reducing runtime errors by 40% while ensuring 99.9% API uptime with Kubernetes health probes.
- Accelerated delayed product launch by automating 25% of validation processes using Python, ensuring timely delivery.
- Constructed an end-to-end test framework in Python for a smart home ecosystem, validating API/mobile/web interfaces, Linux CLI, and load stress scenarios.
- Developed Java microservices integrating Twilio APIs with MQTT queues using Spring Boot, reducing latency by 40% via event-driven architecture.
- Programmed C++ protocol stacks for Zigbee/BLE in smart home routers, enabling MQTT-based cross-device interoperability.
- Configured MinIO object storage on Kubernetes clusters via Docker, deploying S3-compatible volumes for cloud-native apps.
- Co-developed a Kotlin/Jetpack Android app for an internal hackathon, securing 1st place departmentally and 2nd company-wide.

### MVR Cancer Centre & Research Institute

Calicut, India

#### Intern Developer

04/2019 - 07/2019

Cancer Research Institute, featuring a state-of-the-art radiology department.

- Designed a medical imaging tool to merge CBCT image series, extending FOV for enhanced contouring.
- Basic program implemented in Python with NumPy, Pandas and OpenCV library, enhanced processing speed by 70% using GPU, by adapting Nvidia's CUDA in C++ for complex computing steps.
- Enhanced examiner workflows with improved visualization for precise treatment planning.
- Partnered with radiologists to optimize tools based on clinical pain points.

## Education

### National Institute of Technology Calicut

Calicut, India




Bachelor of Technology, Computer Science and Engineering | CGPA: **7.0** / 10

07/2016 - 05/2020

- **Students Chair:** IEEE Computer Society, NIT Calicut Chapter
- **Head of Poster & Design Team:** Tathva 2018, NIT Calicut Technical Fest
- **FOSS Cell Member:** NIT Calicut Free and Open Source Software Community

## Key Achievements

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|  <b>Transitional Team Leadership</b><br>Three time steered cross-functional teams through organizational restructuring phases, implementing agile workflows and daily stand-up protocols. |  <b>Acted as Release Orchestrator</b><br>Successfully managed release for a large scale FTTH/B project with three targeted consumers. |  <b>CI/CD Pipeline Architect</b><br>Integrated automated testing frameworks into DevOps pipelines, achieving 45% faster issue resolution across distributed broadband system. |
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## Technical Skills

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Languages: Python · Go · JavaScript/TypeScript · C · C++ · Dart

Databases: MySQL, PostgreSQL, MongoDB

Frameworks: React · Angular · Vue · Flutter · Robot Framework · Django · FastAPI


Deployment: Docker · Kubernetes · Linux · Ansible · GitLab CI

Tools/Testing: Git · Selenium · Appium · Postman

Soft Skills: Team Collaboration · Problem Solving · Time Management

## Awards

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-  **National Talent Search Scholar**  
Awarded by NCERT through India's premier merit-based scholarship exam for recognizing academic excellence in Class X.

## References




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Dr. Jayaraj P B — Assistant Professor, jayarajpb@nitc.ac.in ; [Website](#)

Chitra Vaidyanathan — Senior Project Manager, Radisys India Ltd ; Chitra.Vaidyanathan@radisys.com ; [LinkedIn](#)

## Find me online

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|  <b>Website</b><br><a href="http://abhijithswaminathan.github.io">abhijithswaminathan.github.io</a> |  <b>GitHub</b><br><a href="https://github.com/AbhijithSwaminathan">AbhijithSwaminathan</a> |  <b>LinkedIn</b><br><a href="https://www.linkedin.com/in/abhijith-swaminathan">abhijith-swaminathan</a> |
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