

# RAKSHITH S

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## SUMMARY

Results-oriented Software Engineer with expertise in C#, .NET Core, Angular, and AWS, specializing in scalable full-stack and cloud-native solutions. Skilled in designing secure data pipelines, RESTful APIs, and Docker-based deployments, with additional strengths in computer vision, machine learning, and high-performance computing. Adept at Agile collaboration and passionate about applying advanced technologies to deliver innovative, enterprise-grade healthcare applications.

## EXPERIENCE

### Siemens Healthineers

Bangalore, India

July 2023 – Present

- **Engineered mission-critical medical imaging systems** operating in highly regulated environments, architecting distributed solutions for complex DICOM workflows using MVVM and microservices. Enhanced 7 of 11 imaging pipelines, ensuring reliability, scalability, and clinician-ready performance.
- **Architected CI/CD pipelines on AWS and Azure DevOps**, reducing deployment cycles by 40% and enabling faster delivery of regulatory-compliant releases. Spearheaded migration from TFS to Git across product lines.
- **Identified edge cases** in imaging data and reducing production defects by **20%** through **validation pipelines and automated test coverage**. Collaborated cross-functionally under **SAFe Agile**.
- Designed and implemented automated test suites using **NUnit/xUnit** and integration pipelines, increasing test coverage and supporting reliable, compliant releases.
- **Refactored legacy codebases into modular, test-driven components**, introducing design patterns and UML documentation aligned with IEC 62304 standards.
- **Developed RESTful APIs and WCF services** for seamless integration with PACS/HIS systems, optimizing serialization and secure communication protocols.
- **Drove adoption of SonarQube** for static analysis and improving **code quality** metrics by **25%**. Mentored junior engineers and interns.
- Analyzed system **performance bottlenecks** across compute, memory, and I/O, applying profiling and optimization strategies to ensure **high throughput and reliability**.

### Siemens Healthineers

Bangalore, India

Software Engineer Intern

February 2023 – July 2023

- Contributed to the design and implementation of a **scalable infrastructure** for a **medical imaging** software product, adhering to industry standards. Acquired experience in **Agile** methodologies and development best practices.
- Engineered a DevOps functionality using Angular for the front-end, .NET C# for the back-end and interface, and **REST APIs** for communication with the server using **MVC** pattern, leading to **60%** time saved in the process.

### Beneath-a-Tree

India

Techno-Managerial STEM Internship

February 2022 – March 2022

- As a team of 4 STEM Trainers in Rural Gujarat for the STEM for Girls initiative, sparking interest in science and research. Planned events, communicated interculturally, and managed resources, logistics and execution.

## SKILLS

**Languages:** C, C++/JS, C#, Java, Python, Bash, PowerShell, Go, SQL

**Frameworks:** .NET Core, Spring Boot, Angular

**Databases:** MongoDB, MySQL, PostgreSQL, Redis

**Cloud/DevOps:** Kusto (KQL), Docker, Git, CI/CD, Azure, Kubernetes, Telemetry, Cloud Sandbox

**Automation & Scripting:** Playwright, Selenium, NUnit/xUnit, contract testing

**BI & Data Systems:** Power BI (familiarity), analytical models, semantic modeling concepts, SQL Server Analysis Services (basic understanding)

**Libraries/Tools:** OpenCV, Mediapipe, scikit-learn, NumPy, Pandas, Matlab, LabVIEW, Jupyter, IntelliJ IDEA, Visual Studio

## PROJECTS

### Order-Matching-Engine (Github) | C++/C#, Docker, AWS

- Implemented a high-performance trading engine in C++/C# with efficient data structures for order books and price matching. Designed multithreaded execution with concurrency controls to handle real-time workloads.

- Exposed RESTful APIs for order submission and trade execution, containerized with Docker and deployed on AWS for scalability and fault tolerance.

**EchoLens – Code Analysis Tool** (Live | Github) | *AI, ML, 3D Visualization*

- Created an AI-powered code analysis platform that predicts risks, detects technical debt, and visualizes dependencies. Implemented semantic commit analysis, ML-based hotspot prediction, and interactive 3D code maps for large software systems.
- Enabled proactive maintenance and improved reliability through predictive dashboards and smart refactoring guidance.

**Med-Pilot** (Github) | *FastAPI, PostgreSQL, OpenAI*

- Developed an AI-driven healthcare platform using FastAPI and PostgreSQL with semantic search powered by OpenAI embeddings.
- Built multi-agent modules for guideline analysis, risk checking, and research insights, integrating diverse sources like PubMed and ClinicalTrials.gov. Delivered secure, scalable APIs and dashboards to support clinicians in evidence-based decision making. Also embedded an Hospital Management system.

**Secure File Encryption Utility** (Github) | *Python, AES*

- Implemented a secure file encryption utility in Python using the AES algorithm with CBC mode and PKCS#7 padding.
- Designed modular key management and error-handling routines to ensure robustness and scalability. Integrated command-line interface for usability and optimized performance with NumPy for fast byte-level operations.

**Music Genre Classification** (Github) | *Python, Librosa, scikit-learn*

- Created a machine learning-based application for automatic classification of music audio files into different genres, leveraged Python, Librosa for audio processing, and scikit-learn for machine learning achieving 67% accuracy.
- Integrated visualization tools like Matplotlib for performance evaluation and customization.

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## EDUCATION

**National Institute of Engineering**

Mysore, India

*B.E in Electronics and Communication Engineering*

August 2019 – July 2023

- Coursework: Computer Networks, Computer Architecture, DBMS, Big Data, Machine Learning, DSA, REST API.
- Language fluency: Kannada, English, Hindi.

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## CO-CURRICULARS

**Xstasis Dance Group:** Siemens Healthineers.**Project Head:** UCSP Research Group, NIE.**Marketing & Design Head:** Onyx E-Cell, NIE.