Medha Shrivastava

+91-7892579865 | medhashri79@gmail.com | Experience - 5+ Years | [LinkedIn](#) | [Github](#) | [Hackerrank](#) | [Leetcode](#)

Summary - Medha is a 5+ year experienced Software Engineer skilled in core C++ and Python along with ancillary backend technologies. Her portfolio is composed of Siemens railway mobility projects & Oracle's healthcare applications. Proficient working in global teams, she has a keen eye to work on large systems with a delivery focus approach.

Professional Experience

Siemens Advanta Mobility   Nov 2021 - Present
Software Engineer   **Pune, India**

- Team - Mobility & Railway Team (SMO-RI) & Platform Engineering

- Technology Stack - Python, Docker, Rest Api, Postgres, Golang, Cucumber, Playwright, Typescript

- **Code Internationalization** - Engineered a multilingual code conversion tool to empower developers spread over 4 countries (India, Germany, France, Spain) working on 4 different languages reducing development time by 30%.
- **Java to Python Migration:** Migrated legacy ETL Java application based on soap XML to Python Rest APIs + Postgres reducing processing time by 90%, code complexity and development speed.
- **Test Automation Implementation -** Led a team of four to migrate over 200+ manual regression tests from scratch for a web application, improving testing efficiency, reducing manual efforts significantly.
  - Frontend Tests - Using Playwright and Typescript, we covered 2 web applications with over 30+ APIs, and 20+ screens.
  - BDD Frameworks: Implemented (BDD) frameworks to run weekly tests using Cucumber in Golang for Grafana, SonarQube & M&T apps.
  - Gitlab Metrics: Built a system to track GitLab Build-C status, monitor 6 KPI metrics, calculate MTTR and other git & pipelines related info.

- Team - BOS (Back Office Server)

- Technology Stack - C++, WINCCOA, Control Scripts, SQL, TCP/IP, UDP

- **Back Office Server:** Built the server to ensure 1000+ hourly real-time, accurate message relays between dispatchers and locomotives.
- **System Enhancement:** Upgraded the rail system to handle message acknowledgments (using XML & BOS), improving dispatcher-locomotive communication and rail operation efficiency resulting in 5% increase in efficient communication.

- Team - TPS Live

- Technology Stack - C++11/14/17, Embedded C, QT, QML, CMake, Make, Socket Programming

- **Train Software Maintenance:** Managed maintenance and enhancements for train software written in C++ which powered 4 core modules of runtime calculations, driving dynamics, synchronous simulation and event protocols.
- **Version Migration:** Migrated legacy code written in C++11 to address dependencies and complexities, reducing build time by 30%.
- **Pre-Calculation Checks:** Performed checks and routing for train operations, using algorithms like Dijkstra's algorithm, stochastic simulation, numerical integrations, dispatching logics to perform conflict detection, runtime calculations (RTC)and driving dynamics.

Oracle Health   **Bangalore, India**

- Team - Clinical Assessments Dev

- Technology Stack - VC++, MFC, COM, CCL (Cerner Command Language), CMake, Make, MYSQL

Software Engineer   **Aug 2020 - Nov 2021**

- **Patient Data Charts:** Integrated IVIEW, PowerForms, and BMDI to chart hemodynamic patient data over time, used in healthcare.
- **Defect Reduction:** Identified and resolved root causes of user-reported defects, significantly improving system reliability.
- **Debugging Proficiency:** Expert in Win32 user mode & code debugging, ensuring efficient troubleshooting and system optimization.

Software Engineering Intern   **Jan 2020 - Jul 2020**

- **Patient-Outpatient-Registration Implementation:** Enabled doctors and nurses to access 10+ patient information and vitals, and implemented CI/CD processes using Jenkins for automated build, test, and deployment.

Technical Skills

Programming Languages	- Python, C++, Embedded C, Golang, JAVA, Typescript, CCL, Socket Programming
Python Specific Frameworks	- Flask, FastAPI, Alchemy
C++ Specific Frameworks	- Boost, VC++, COM, MFC, QT, QML
Testing & Monitoring Frameworks	- Cucumber, Grafana, Playwright, Sonarqube
Build tool chains	- CMake, Make
Backend Technologies	- PostgreSQL, REST API, MySQL, Linux
Deployment	- Docker, Docker-Compose, GitLab, CI/CD
Cloud Tools	- EC2, Lambda, Cloudfront, S3, RDS, SNS, SQS, SES

Education

B.E, Information Science and Engineering	Siddaganga Institute of Technology 2016-2020 GPA: 8.35
XIIth CBSE Boards	Study Hall	2015	GPA: 92.33%