

GAYATHRY A

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Technical Skills

Programming Languages: C++, C

Operating Systems: Windows (32/64-bit), basic exposure to Linux

Concepts: Object-Oriented Programming (OOP), Object-Oriented Design (OOD), Data Structures & Algorithms, SDLC

UI / Frameworks: MFC (C++), basic UI design experience

Networking: Socket Programming (Winsock), TCP/IP (basic)

Databases: MySQL

Tools: Git, SVN, Coverity (Static Analysis), Postman

Professional Summary

Software Engineer (C++) with hands-on experience across the full **Software Development Life Cycle (SDLC)**, including system design, component development, and applying **software craftsmanship** principles with a strong focus on **clean code, maintainability, reliability, defect analysis, production support, and continuous improvement**. Experienced in working within **Agile development** practices through collaborative team environments. Proven ability to deliver high-quality, reusable code, analyze production issues, and collaborate with cross-functional teams to develop and integrate **API-driven**, data-centric solutions.

Experience

Quest global

Nov 2024-Present

Trainee Engineer

Trivandrum, India

- Designed and developed **C++/MFC Windows applications (32/64-bit)** for MRI engineering systems with focus on performance, reliability, and maintainability.
- Improved overall software stability by **30%** through systematic **defect analysis, debugging, unit testing, and validation**.
- Performed **static code analysis** using **Coverity** to identify critical defects and enhance code quality.
- Reviewed and updated **workflow diagrams, design documents and test cases** to ensure alignment with system requirements.
- Collaborated with cross-functional stakeholders to refine system design and implement improvements.
- Analyzed **application error logs, runtime logs, and crash reports** to identify recurring production issues and deploy long-term fixes.
- Designed and implemented new features in the **Service Data Export module**, enabling reliable extraction and transformation of study-related instrument data for downstream analysis and reporting.
- Adhered to established development processes, **best-known methods (BKMs)**, and continuous delivery practices.

Brahmanet IT Solutions

Nov 2023-Aug 2024

Software Engineer Intern

Kochi, India

- Developed and maintained software applications with focus on **backend logic, API integration, and data handling**.
- Designed and tested **REST APIs** using **Postman** to ensure reliable system communication.
- Implemented features including **email notifications, account management, and subscription handling**.
- Implemented subscription management and performed **MySQL schema** design and query optimization.
- Designed and optimized **MySQL schemas**, improving query performance and data integrity.
- Worked in **Agile teams**, participating in sprint planning, daily standups, and retrospectives.

Education

College Of Engineering Vadakara

June 2019 – June 2023

Bachelor of Technology

Kozhikode, India

Computer Science

8.2 CGPA

Projects

Chat Application – C++ (Winsock) | Continuous Integration

- Designed and implemented a real-time **client–server chat application** using C++ socket programming (Winsock) on Windows.
- Developed a **multithreaded server** to handle multiple concurrent client connections efficiently.
- Applied **networking fundamentals** including TCP/IP communication, socket lifecycle management, and error handling.
- Implemented **Continuous Integration (CI)** using **GitHub Actions** to:
 - Automatically build **client and server executables** on code commits
 - Validate successful compilation in a **Windows build environment**
 - **Ensure early detection of build and integration issues**
- Followed **modular design and OOP principles** to improve maintainability and scalability.
- Performed debugging and validation to ensure reliable message delivery and stable connections.

Patient Management System – C++ / MFC

- Designed and developed a **Windows desktop application** using **C++ and MFC** to store, update, retrieve, and display patient information efficiently.
- Implemented **MFC dialog-based UI** for data entry, validation, and record management.
- Used **file handling and object serialization** to persist patient data, enabling reliable save, load, and update operations.
- Applied **Object-Oriented Programming (OOP)** principles to structure patient records, improve code maintainability, and support future enhancements.
- Implemented basic **input validation and error handling** to ensure data consistency and application stability.
- Performed debugging and testing to verify correctness of file operations and UI workflows.