ROSHAN PAMPARI

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Summary

Software Developer with **3+** years of experience in **C++**, specializing in **concurrency, multithreading, and synchronization**. Skilled in designing and developing **large-scale distributed systems**, **distributed databases**, and **database internals**. Experienced in **performance analysis**, **debugging**, and improving reliability of distributed computing systems, with a strong focus on **code quality**, **code reviews**, system health, testing, and documentation. Demonstrated ability to **diagnose and resolve issues** while contributing to **query processing**, **query optimization**, and **infrastructure performance**.

Education

University of Massachusetts, Dartmouth | Master's in Data Science — Aug 2024 - May 2026

- GPA: 3.9/4.0

VNR Vignana Jyothi Institute of Engineering & Technology | B.Tech in Computer Science — Aug 2017 - June 2021

- GPA: 8.1/10

Experience

Software Development Engineer , SIEMENS — Jul 2021 – Jul 2024

- Pioneered the development of scalable **C++**, **Multi-threaded** audit technology for **distributed systems**, leveraging **object-oriented design** and **Windows APIs**, improving audit processing efficiency by **20%**.
- Migrated legacy **C++** code from Visual Studio 2015 to Visual Studio 2022, applying **best coding practices** and conducting **code reviews**, reducing application load times by **25%**.
- Revamped license components by collaborating with cross-functional teams, enhancing **security, privacy, and accessibility**, and improving **system performance** by **35%**.
- Resolved and **documented** 100% of customer-reported issues through effective **debugging, testing, and code quality improvements**, strengthening overall **system health and reliability**.
- Diagnosed and fixed a critical authentication issue within 6 hours of detection, implementing **reliable code practices**, and improving **system performance** by **40%**.

Software Engineer Intern, Nalsoft — May 2021 – Jul 2021

- Built database solutions with **SQL** and **PL/SQL**, focusing on **relational databases**, **query optimization**, while ensuring **reliability, performance, and code quality**.

Projects

Carbon Emission Calculation of Windows Applications — SIEMENS

- **Aim:** Driving sustainability through efficient programming with a focus on **performance analysis** and **system reliability**.
- **Achievement:** Secured **3rd** place among 600+ competing solutions in the **SIEMENS Xcelerate@DASS Hackathon**.
- **Execution:** Developed a PoC, **multi-threaded C++ Windows application** leveraging **concurrency and synchronization** to calculate carbon emissions of executables in **distributed, multi-tiered systems**.
- **Tech used:** C++, Windows APIs, **Distributed Systems**, Object-Oriented Design, SQL, **Database Internals**, **Query Processing**.

Obesity Prediction Based on Daily Life Habits — VNR VJIET

- **Aim:** Preventing obesity through habit analysis
- **Achievement :** Published a Research Paper at ICACECS-2021. *Springer Chapter*
- **Execution :** Developed **Machine Learning** model with 93% accuracy to predict obesity levels from complex datasets.
- **Tech Used:** Python, Machine Learning, Data Analysis

Technologies

Core: Object-Oriented Design, DSA, Relational Databases, Cross-Platform Testing, Documentation, Code Quality & Reliability.

Languages: C++, C, Python, SQL, PL/SQL.

Technologies: Windows APIs, Visual Studio, MS SQL Server, PostgreSQL.

Technical Skills: Concurrency, Multithreading, Synchronization, Distributed Systems, Debugging, Performance Analysis, Query Processing & Optimization, Cross-Team Collaboration, Leadership.

Publications

Obesity Prediction based on Daily Life Habits at ICACECS-2021 — Feb 2022

10.1007/978-981-16-7389-4_39