Harshit Bansal

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Profile Summary

Software Developer with 2 years of experience in building high-performance systems at Bombay Stock Exchange. Proficient in C, C++, MFC, and SQL with expertise in socket programming, FIX protocol, and Solace API. Strong background in real-time systems, multithreading, and low-latency solutions for financial markets.

Technical Skills

Programming Languages: C, C++, SQL

Frameworks Libraries: MFC (Microsoft Foundation Class Library)

Messaging Protocols: FIX Protocol, Solace API, Socket Programming

Concepts: Data Structures and Algorithms, Multithreading, Networking Protocols, MySQL

Tools: SVN, GitHub, Visual Studio

Education

Masai School **02/2022 – 12/2022**
Software Development Course *Bangalore, India*

Laxmi Chand Katori Devi **08/2016 – 10/2020**
Bachelor of Science (B.Sc.) Mathematics *Hathras, India*

Work Experience

Bombay Stock Exchange (BSE) **03/2023 – Present**
Software Developer *Mumbai, India*

- Developed a high-performance socket-based communication system, increasing message throughput by 30% and reducing latency by 20ms.
- Built FIX protocol-based integration systems for automated trading, processing 25K+ orders per second with 99% reliability.
- Established Solace API-based messaging, improving system uptime and ensuring zero data loss in high-volume transactions.
- Collaborated with 10+ engineers to deliver three major releases, enhancing system performance by 40%.
- Reduced critical UAT and production issues by 90% through continuous monitoring and timely bug fixes.

Projects

FIX Protocol Communication Suite
Technologies Used: C++, MFC, MySQL, FIX Protocol, Socket Programming, Multithreading

- Designed Fix Client to initiate and manage FIX sessions, send order packets, and process acknowledgments from the exchange.
- Created Fix Server to validate incoming FIX messages, manage session states, and enable real-time order routing.
- Reduced transaction time by optimizing message parsing and low-latency communication.
- Enhanced system reliability by implementing multithreaded socket handling, minimizing message drops during peak trading hours.

Message-Oriented Middleware: Solace Pub/Sub Framework
Technologies Used: C++, MFC, MySQL Solace API, Multithreading

- Built a Solace Publisher for publishing real-time financial data securely to multiple consumers.
- Constructed a Solace Subscriber to process and consume messages efficiently, improving message delivery performance.
- Enhanced scalability by handling millions of messages daily with optimized threading.

TCP-Based Communication Framework
Technologies Used: C++, MFC, Socket Programming, Networking Protocols

- Established a TCP Client to establish connections with remote servers and exchange data packets.
- Implemented a TCP Server capable of handling thousands of simultaneous connections with minimal downtime.
- Improved network efficiency through optimized socket programming techniques.