

Aman Singh Chauhan

SENIOR PRINCIPAL SOFTWARE ENGINEER

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SUMMARY

Senior Principal Software Engineer with 9+ years of experience building and scaling high-throughput, low-latency backend systems using C++ and Go. Strong expertise in systems programming, distributed systems, and performance optimization, with a proven track record of driving platform migrations, improving system scalability, and enabling significant traffic growth. Experienced in owning critical components across Contextual, Identity, and AdTech platforms, delivering reliable, production-grade systems under sustained high traffic.

SKILLS

Languages: C++, C, Go, Python

Systems: Distributed Systems, Multithreading, Concurrency, Low-Latency Systems, Memory Management

Performance & Quality: Profiling, Latency Optimization, GDB, Valgrind, GTest

Infrastructure: Linux, Docker, Kubernetes, CI/CD (Jenkins, TeamCity), Git

Datastores: MySQL, Oracle, Sybase, NoSQL, Aerospike

Domains: AdTech, Investment Banking, Telecom

EDUCATION

B.Tech - Computer Science Engineering

Chandigarh Engineering College, Mohali, Punjab | 2012-2016

WORK EXPERIENCE

PubMatic India Pvt. Ltd, Pune, India

Senior Principal Software Engineer | Oct 2023 – Present

- Re-architected Contextual traffic distribution by transforming burst-based refresh patterns into evenly distributed flows, significantly reducing peak load and enabling up to 10x higher sustainable QPS.
- Architected and optimized AdServer components in C/C++, supporting 5000+ requests per second while maintaining strict latency SLAs.
- Reduced application latency by ~20% through targeted profiling and performance optimization of critical system paths.
- Served as technical owner for Contextual and Identity components, driving architectural decisions impacting system scalability, reliability, and performance.
- Led migration of Identity-related modules to NextGen C++, improving maintainability, performance, and architectural consistency across the platform.
- Built a Real-Time Data Processing (RTDP) service in Go, enabling scalable real-time audience ingestion across multiple downstream systems.
- Led development of contextual vendor integrations (Go), enabling scalable deal and ad targeting across production-scale traffic.
- Directed development of a Generative AI-based web page categorization service, enabling contextual targeting at scale.
- Partnered with product and cross-functional teams to deliver latency-sensitive, revenue-critical features under sustained high traffic.
- Mentored and led a team of 5 engineers, driving code quality, design standards, and execution efficiency.

Credit Suisse Services AG, Pune, India

Software Development Engineer 3 | Jun 2022 – Oct 2023

- Built high-performance C++ components for latency-sensitive financial systems, improving system responsiveness and stability.
- Resolved complex production issues using debugging and profiling tools, improving application reliability, and reducing resolution time.
- Developed and maintained CI/CD pipelines using Jenkins, improving deployment consistency and reducing manual effort.
- Introduced Google Test (GTest) and enabled TDD adoption, improving test coverage, and reducing regression defects.
- Automated database versioning and deployment using Liquibase, improving release reliability.
- Implemented a Go-based regression automation tool, reducing manual testing effort and accelerating regression cycles.

Synechron Inc, Pune, India

Technology Lead | Apr 2021 – Jun 2022

- Worked on a high-throughput C++ trade processing system handling real-time financial transactions.
- Led a team of engineers, ensuring delivery quality, system correctness, and performance standards.
- Identified and resolved memory leaks and performance bottlenecks using GDB and Valgrind.
- Built performance-oriented C++ solutions based on system profiling and analysis.
- Acted as a key technical point of contact for client communication and delivery tracking.

Amdocs DVCI, Pune, India

Senior Software Developer | Aug 2016 – Apr 2021

- Improved application latency by up to 25% through targeted performance optimizations.
- Built and maintained C/C++ components for large-scale telecom systems.
- Debugged memory and stability issues using GDB and Valgrind.
- Developed unit and integration test cases for system validation.
- Collaborated with cross-functional teams to deliver reliable production systems.

CERTIFICATIONS & AWARDS

- Microsoft AZ-900: Azure Fundamentals
- 1st Prize, Hackathon (Credit Suisse India) — Python-based MoM Bot
- Recognized for designing a contextual lookup strategy enabling 10× higher QPS using existing infrastructure
- Recognized for leading Real-Time Data Partner integration with zero performance degradation
- Employee of the Month & Star Award — Synechron
- Recognition Awards — Amdocs