

# RAHUL GUPTA

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## PROFESSIONAL SUMMARY

Senior Software Engineer with 13+ years of experience designing, implementing, and optimizing large-scale backend and systems software across networking and distributed platforms. Primary **expertise in C/C++ programming for backend services** with additional production experience in **Go and Python for async API handling and engineering automation.**

Strong individual contributor with a proven record of end-to-end feature ownership, performance optimization, and debugging of complex distributed systems. Experienced in building secure, high-throughput services and supporting tooling across multiple languages in production environments.

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## CORE SKILLS

**C, C++, Go, Python, Shell | Multithreading, IPC, Memory Management | DNS, DoT, DoH, ODoH | REST, gRPC, Async APIs | Linux | Docker | Kubernetes | SQL | Performance Debugging (gdb, Valgrind, perf)**

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## PROFESSIONAL EXPERIENCE

### F5, Inc., Hyderabad - Sr. Engineer, Software / Oct 2022 - Aug 2025

- Designed and implemented DNS security and privacy features including ODoH and DNS cache optimizations, improving performance and compliance.
- Owned backend features end-to-end: **architecture, C/C++ implementation, performance tuning, and production rollout.**
- Developed supporting **backend components and internal services using Go** for handling asynchronous API workflows and service integrations.
- Built and maintained **Python-based automation and regression tooling** to validate complex networking features and improve engineering productivity.
- Enhanced BIG-IP DNS with secure protocol support and low-latency request handling.
- Debugged and resolved complex **multi-threaded, protocol, and memory-related issues** in production systems under high traffic conditions.
- Mentored junior engineers on systems programming, debugging techniques, and performance analysis.

### F5, Inc., Hyderabad - Engineer III, Software / May 2020 - Sep 2022

- Implemented **DNS over TLS (DoT)** support, modernizing the DNS stack for enterprise customers.
- Developed and optimized networking components focused on throughput and correctness.
- Authored design documentation and participated in technical reviews for backend features.

### GlobalLogic India, Gurugram - Associate Consultant / May 2019 - May 2020

- Built and enhanced **C++-based data mediation systems** processing telecom CDRs at scale.
- Delivered features independently in distributed production environments.

### Capgemini Engineering (formerly Altran/Aricent), Gurugram -

Technical Leader / Senior Software Engineer / Software Engineer | 2012 – 2018

- Designed and implemented C/C++ backend components for large-scale telecom billing and Intelligent Network (IN) platforms handling high-throughput, low-latency request flows.

- Debugged and optimized memory management, concurrency, and performance bottlenecks in long-running production services.
  - Built internal automation and developer tooling to streamline data capture, troubleshooting, and deployment workflows.
  - Developed proof-of-concepts for scalability and performance improvements, several of which were adopted into production roadmaps.
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## ENGINEERING RECOGNITIONS

- **Spotlight of the Month – GlobalLogic (2019):** Recognized for outstanding technical contributions and ownership of complex backend deliverables in large-scale production systems.
  - **Nokia & Aricent Leadership Recognition (2016):** Acknowledged for engineering excellence and impactful automation that improved system reliability and operational efficiency.
  - **Team SNAP Award – Aricent (2014):** Awarded for strong technical execution and collaboration on high-throughput telecom platforms.
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## EDUCATION

- **B.Tech, Computer Science & Engineering | Kalinga Institute of Industrial Technology, Bhubaneswar | 2012 |**  
CGPA: 8.45
- **12th | Lucknow Public College | 2007 | 80.67%**
- **10th | Lucknow Public School | 2005 | 85.33%**