

Shammy Kumar

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EDUCATION

Stony Brook University

Master of Science in Computer Engineering

Stony Brook, NY

Aug 2025 – May 2027

Guru Gobind Singh Indraprastha University

Bachelor of Technology in Electrical & Electronics Engineering

Delhi, India

Aug 2016 – Sep 2020

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, TypeScript, Go, C++, SQL

Frameworks: Spring Boot, React, Angular 12, Node.js, Express, JUnit, Mockito

Cloud & DevOps: AWS, GCP, Azure, Docker, Jenkins, CI/CD, Git, GitHub Actions, SonarQube

Databases & Messaging: PostgreSQL, MongoDB, MySQL, Redis, RabbitMQ, Kafka

AI/ML: PyTorch, TensorFlow, HuggingFace, SciBERT, NER, NumPy, Pandas

EXPERIENCE

Bank of America

Software Engineer

Oct 2022 – Jul 2025

Gurugram, India

- Architected the migration of mission-critical legacy UI from AngularJS to **Angular 12**, reducing technical debt by 30% and improving frontend performance by 25%.
- Strengthened enterprise security by implementing **Role-Based Access Control (RBAC)**, resolving 85% of security vulnerabilities and ensuring 100% audit compliance.
- Optimized high-reliability financial modules using **Spring Boot**, achieving **90%+ unit test coverage** and decreasing production defects by 15%.
- Partnered with cross-functional teams to deliver **90+ user stories**, enabling seamless tax payment processing for millions of users across the APAC region.

Infosys

Systems Engineer

Jan 2021 – Oct 2022

Gurugram, India

- Transitioned a legacy monolithic application to a **Microservices architecture**, reducing page load times by **40%** and doubling system scalability.
- Boosted SQL database efficiency by **60%** through strategic data segmentation and index tuning, significantly reducing query latency.
- Directed full-lifecycle QA and bug resolution for enterprise UI/Backend modules, resolving **80+ critical defects**.

PROJECTS

Fault-Tolerant HTTP Load Balancer | Go, Network Programming

Dec 2025

- Built a high-availability load balancer in **Go** implementing active health monitoring and **automated** failover for 10k+ concurrent requests.
- Applied round-robin algorithms and mutex-based concurrency control to manage traffic across active backends with zero downtime.

AI Citation Parser using Transformers | Python, SciBERT, NLP

Nov 2025

- Engineered a SciBERT-based NER model leveraging the **GIANT dataset from Harvard Dataverse** (1B+ synthetic citations), achieving a **95% F1-score**.
- Built a scalable pipeline to process a 512GB XML subset, implementing **BIO tagging** for token classification.
- Fine-tuned transformer models for high-variance formats, reducing manual metadata extraction time by **90%**.

Automated Financial Workflow Engine | Java, Spring Boot, TIFF Processing

Apr 2023

- Designed and deployed a specialized engine to automate the processing of legacy TIFF-formatted cheques, clearing a **\$7M+ backlog**.
- Integrated engine with clearinghouse APIs for real-time tracking, reducing manual processing intervention by 70%.

RESEARCH PUBLICATIONS

Machine Learning Approaches for Entity Extraction from Citation Strings

Nov 2023

- Published in Decision Intelligence, Lecture Notes in Electrical Engineering, **Springer**.