

# Bhushan Asati

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## Education

**Stevens Institute of Technology**, Hoboken, NJ

Aug 2024 – Dec 2025

Master of Science in Computer Science

GPA: 3.90/4

Relevant Coursework: Data Structures, Algorithms, Distributed Systems, Cloud Infrastructure, AI/ML Systems

**Savitribai Phule Pune University**, Pune, Maharashtra

Nov 2020 – May 2023

Bachelor of Engineering in Computer Engineering (completed while working Full-time)

GPA: 9.25/10

Relevant Coursework: Machine Learning, Deep Learning, Computer Networks, Software Engineering, Operating Systems

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## Skills

**Programming Languages:** Python, Java, C++, Go, JavaScript, SQL, Data Structures, Algorithms, Debugging, Testing

**Cloud Platforms:** Google Cloud (GCE, GKE, Cloud Run), Autoscaling, Load Balancing, Cloud-Native Services

**DevOps & Backend:** Docker, Kubernetes, CI/CD, Git, Jenkins, Microservices, gRPC, Monitoring, Backend Services

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## Professional Experience

**Infosys**, Senior Software Engineer (Senior System Associate)

Jun 2022 – Aug 2024

- Engineered high-throughput **backend services** supporting **large-scale advertising platforms** with robust **system design**, increasing request handling capacity by **35%** through optimized **concurrency models**, efficient data structures, and Kubernetes-based service orchestration, ensuring low latency, fault tolerance, scalability, observability, and reliability.
- Diagnosed and resolved complex production issues across compute, network, and storage layers, improving overall service reliability by **28%** using structured debugging, **telemetry analysis**, and fault isolation techniques in distributed systems.
- Led technical evaluations during code and design reviews, strengthening production readiness by **30%** through enforceable testing standards, maintainability checks, and **system-level scalability** assessments for **long-running** service platforms.

**iNeuron Intelligence Pvt. Ltd**, Machine Learning Intern

Feb 2022 – May 2022

- Implemented production-grade inference pipelines using Software Development in Python, reducing prediction latency by **22%** by tuning request aggregation, improving resource utilization, and deploying automated service validation workflows.
- Automated build and release processes for data-driven applications, **accelerating deployment** cycles by **35%** using CI pipelines, integration testing, and controlled promotion strategies across cloud environments with production reliability.
- Strengthened **software quality** by contributing to architecture walkthroughs and technical documentation, enhancing system maintainability and troubleshooting efficiency through structured feedback and **observability instrumentation**.

**Technocolabs Software**, Software Engineering Intern

Aug 2021 – Nov 2021

- Constructed scalable **backend data workflows** capable of handling **variable load**, enabling **25%** higher throughput by coordinating parallel processing, messaging components, and compute resources across **distributed services** efficiently.
  - Introduced comprehensive health **monitoring** mechanisms, increasing operational visibility by **30%** through runtime indicators, alert thresholds, service-level diagnostics, and integration test validation for backend components in production.
  - Optimized analytical execution paths, cutting processing time by **40%** by refining algorithmic logic, incorporating unit test coverage, participating in design discussions, and documenting performance **trade-offs** for future system improvements.
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## Projects

**Privacy-Preserving NLP through Federated Learning for Medical Text**

Jan 2025 – May 2025

- Architected a **federated NLP training** framework for sensitive medical documents, achieving zero raw-data centralization by distributing model updates across isolated client nodes using secure aggregation and privacy-preserving protocols.
- Validated system robustness by diagnosing convergence drift and **partial-client** failures, improving training reliability by **31%** through fault-tolerant coordination logic and distributed debugging across heterogeneous environments at scale.
- Operationalized compliant **backend services** for model evaluation and monitoring, reducing inference inconsistencies by **27%** via automated testing pipelines, versioned artifacts, and controlled rollout mechanisms in production environments.

**Scalable Acquisitions & Engagement Metrics Pipeline (Spark + Kafka + BigQuery)**

Sep 2024 – Dec 2024

- Designed a real-time analytics pipeline processing high-volume mobile engagement events, supporting **5x** traffic growth through Kafka ingestion, Spark streaming transformations, and **BigQuery-based** aggregation at scale with low latency.
  - Optimized end-to-end processing latency by **38%** by tuning partition strategies, managing back-pressure, and analyzing performance bottlenecks across **compute, network**, and storage layers in distributed workflows under production load.
  - Hardened data reliability by building backend services and automation tools, implementing schema validation, automated recovery routines, and integration test coverage, increasing pipeline stability by **30%** under bursty production workloads.
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## Certifications

- Google Cloud Certification - Professional Machine Learning Engineer

Feb 2025