SHREAY PATEL

Education

Florida State University
2018 − 2022

B.S. Computer Science, Minor: Mathematics & Physics *GPA: 3.6/4.0*

— **Coursework:** Data Structures & Algorithms, Operating Systems, Natural Language Processing, Object Oriented Programming, Theory of Computation, Artificial Intelligence, Databases, Discrete Mathematics, Calculus, Statistics

Experience

Datastax (Acquired by IBM)
Jan 2026 − Present

Software Engineer - Database Core *Palo Alto, CA*

— Database internals for Astra DB, a cloud-native NoSQL database built on Apache Cassandra with vector search for AI/RAG workloads and elastic scalability.

Broadcom
Oct 2023 − Jan 2026

Software Engineer II - Database Platform *Palo Alto, CA*

— Overhauled existing key-value store to a distributed PostgreSQL architecture, preserving transactional guarantees, multi-cluster replication, and exactly-once delivery at scale.
— Built orchestration service for Postgres logical replication, replacing custom streaming layer with native replication primitives, reducing architecture complexity and increasing reliability.
— Productionized datastore management plane leveraging Patroni, the Zalando Postgres Operator, and Debezium to enable leader election, high availability, and real-time CDC streaming.

Software Engineer I - Database Platform

— Partnered with product engineering teams to align datastore infrastructure with evolving business requirements.
— Diagnosed and remediated concurrency bugs and performance bottlenecks in distributed services, reducing CPU utilization and strengthening overall system availability.
— Handled on-call rotation triaging live production systems, managing failovers, component replacements, and data loss scenarios.

VMware
Jul 2022 − Oct 2023

Software Engineer - Datastore *Palo Alto, CA*

— Core contributor to CorfuDB (distributed log-based key-value store) and its streaming replication service, Log Replicator.
— Reduced build times through Kubernetes-based CI/CD pipeline, accelerating development and testing cycles.
— Designed and executed V1→V2 architecture migration pipeline with partition tolerance, rollback capabilities, and a zero-downtime rolling upgrade protocol for multi-region data replication clusters.

Black Knight Financial
Jun 2021 − Aug 2021

Software Engineer - Internship *Jacksonville, FL*

— Built real-time observability dashboard for test analytics and release metrics (React.js/Node.js).
— Established CI/CD pipeline foundations for high-volume loan servicing platform.

Projects

MapReduce Implementation | *Go, RPC, Concurrency*

— Built distributed MapReduce system in Go with custom RPC protocol for coordinating parallel text processing.
— Leveraged goroutines for concurrent map/reduce execution, processing 10K+ key-value pairs across 5+ workers.
— Implemented fault-tolerant task scheduling with automatic crash recovery and timeout-based reassignment.

Multi-threaded Elevator Scheduler | *C, Unix, Concurrency*

— Implemented lock-free producer-consumer solution in C with custom scheduling algorithm (fastest among 80+ implementations).

Technical Stack

Languages: Java, Python, C, C++, Go, SQL, JavaScript/HTML/CSS, Bash, Make
Systems: Postgres, CorfuDB, Kubernetes, Docker, Bazel, Patroni, Debezium, AWS, Linux, Git
Frameworks: Spring, React.js, Node.js, Django, Flask, Protocol Buffers, gRPC, Jenkins
Distributed Systems: RPC, CDC, Logical Replication, Consensus Protocols, Leader Election, Fault Tolerance