

Aviral Srivastava

• Github: [kebab-mai-haddi](#) • LinkedIn: [/in/sriavi](#) • Website: [aviralsrivastava.com](#)
• Email: hi@avisri.com • +1-617-283-3811 • Blog

EDUCATION	Boston University , Boston, MA. MS, Computer Science. CGPA : 3.77/4 Vellore Institute of Technology , Chennai, B.Tech, CS and Engg. CGPA : 3.56/4.	Sep 2019 - Dec 2020 Jul 2014 - May 2018
SKILLS	▪ Rust, Python, Scala, C++, Go, Java, PHP, SQL, Spark, Aurora, Mesos, Kubernetes, Docker, Vagrant, Argo, Airflow, Kafka, Flink, Key-value DBs, AWS, GCP, Azure, On-Premise Data Centers	
PROJECTS	▪ Zcash , Scalable UML , Polkadot-IPFS , etc.	
WORK EXPERIENCE	Pinecone , Senior Software Engineer(SWE II), Platform, NYC • Single handedly expanded Pinecone's serverless offering to GCP. Redesigned core services for cross-cloud compatibility, including a custom serverless solution with auto-scaling for AlloyDB. • Engineered robust failover detection and zero-downtime migration strategies for distributed database systems , including custom work on AlloyDB. Enhanced comprehensive benchmarking tools and identified performance bottlenecks across cloud providers. • Built Global Control Plane, enabling product's transition to serverless architecture with zero-downtime migration. Reduced request time from 10 seconds to around 1 second, and decreased operational costs by 10x. Implemented Observability for real-time metrics and alerting for proactive issue resolution in distributed environments. • Overall, as an early joiner, I owned stuff across Database tech stack: System Stability (built sli-checkers for distributed environment), CICD(onceall, reducing costs by \$20k for multiple environments: dev, stage, preprod, etc), Security(implemented Gated Security using Cloud Armor), Pod Disruption Budget, and everything else that was required to build and operate Pinecone. • Served as on-call engineer for both Pinecone Serverless (v4) and Pod-based (v3) distributed systems, gaining comprehensive knowledge and troubleshooting experience. • Stack: Rust, Google Cloud Run, Cloud Spanner, Pulumi, SeaORM, Datadog, Kubernetes . Focus on failover mechanisms for Serverless experience.	Apr 2023 - Present
	Twitter , Software Engineer II, Graph Storage(Platform/Real Time Storage), NYC • We replaced the decade old Flock (Graph Storage service) with a new service (Flock v1.5) that will scale the write pipeline, improve data consistency, and reduce human ops. Led setting up v1.5 as a multi-data Center setup. • Proposed, designed, and developed Backup Verification in Scala : a service to verify 300 TB of backups as they (backups) are used in v1.5 to serve live traffic. • Performed oncall operations such as rebalancing shards, restoring servers during heatwave, modifying mirrorsets to cater fast product iterations, etc. • Led the team for building a managed graph database offering for analytics purposes, graph machine learning, and applications. Reduced onboarding time from 1 week to minutes, for data teams at Twitter. • Supervised request based authorization for Flock data, mentored two interns.	Apr 2021 - Feb 2023
	Atlan , Software Engineer(Data) • Ensured the development and on-premise deployments of dashboards like United Nations SDGs monitoring , Ujjwala Dashboard using Python3, Kubernetes, Docker and AWS S3 . • Integrated serverless JupyterHub: a multi-user hub that spawns, manages, and proxies multiple instances of the single-user Jupyter notebook server. Stack: papermill, Python3, Docker, Helm, Kubernetes . Used by companies like Unilever, Mindshare, McKinsey & Co. • Built and deployed Data Repository: a version control system for tabular data, including features like 'git diff', rollback, at a scale of over billion rows in one cycle . Stack: Python3, S3, RocksDB, KyotoDB, Hive metastore and PrestoDB . This scaled the production releases by 300% : 1 project release to 3 project releases per quarter.	May 2018 - Jul 2019
	Redhat , Software Engineering (Data) Intern, Internal Data-Hub team, Boston • Re-partitioned the schema of SOS reports (10 Trillion+ rows, 100+ TeraBytes data) to ensure high data availability and low latency, using Argo, Spark, JupyterHub, Kubernetes .	May 2020 - Dec 2020
	Advisory, Research & Entrepreneurship • Centify (Co-founder & CTO): Built audience engagement tools for digital media platforms. • Find Signal (Technical Advisor): Consulted on blockchain infrastructure and databases. • Boston University (Research Associate): Secured MIT-ICORPS funding for scalable UML diagram research commercialization.	