# Allen Febi Mariaantony Alphonsa

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## Education

**Northeastern University** — Boston, MA
*M.S. Computer Science, GPA: 3.66/4.0* — *Aug. 2025 – May 2027*
**Relevant Coursework:** Machine Learning Operations, Cloud Computing, Database Management Systems

**VIT-AP University** — Andhra Pradesh, India
*B.Tech. Computer Science, GPA: 8.93/10* — *Aug. 2021 – May 2025*
**Relevant Coursework:** Artificial Intelligence, Computer Networking, Data Structures, Computer Architecture

## Technical Skills

**Languages:** Python, SQL, Java, JavaScript, TypeScript

**Data Engineering:** Spark, PySpark, Apache Airflow, Apache Iceberg, dbt, Snowflake, ETL/ELT, CDC, data modeling, data quality

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**Databases & Backend:** PostgreSQL/PostGIS, Redis/ElastiCache, SQLite, FastAPI, Node.js/Express, REST APIs, WebSockets

**Cloud & DevOps:** AWS (ECS/Fargate, ECR, RDS, S3, Glue, Lambda, VPC, CloudWatch), Docker, GitHub Actions, CI/CD, Git, Linux

## Experience

**SharkNinja** — Needham, MA
*Applied AI & Analytics Intern* — *Jun. 2026 – Aug. 2026*
- Built Snowflake/dbt transformations to parse, standardize, and validate 12+ survey formats. Added incremental loads, change-data capture, and soft-delete handling for reliable refreshes.
- Engineered a multi-pass Snowflake Cortex thematic-analysis pipeline across 256M consumer-feedback rows and diagnosed a deduplication defect that silently dropped survey responses, restoring data completeness.
- Automated cross-system Salesforce localization across 12 markets and OCR tagging for 10,000+ Cloudinary assets, reducing turnaround 60% and achieving 95% tagging accuracy.

**Northeastern University, Food ALERT Project** — Boston, MA
*Graduate Research Assistant* — *Jan. 2026 – Present*
- Led Food ALERT's migration from Hetzner to AWS, containerizing FastAPI services and deploying them on ECS Fargate through ECR-backed CI/CD with load balancing, private networking, secrets, and CloudWatch observability.
- Designed the data layer with RDS PostgreSQL/PostGIS, ElastiCache, and S3/Glue. Owned queues, schedulers, backups, and production support. Built six-signal fraud controls that reduced manual review time by 60%.

**Siga Infotech** — Trivandrum, India
*Software Engineer, Part-Time* — *Apr. 2024 – Jul. 2025*
- Owned CI/CD and releases for a Flutter POS application, automating builds, tests, packaging, and environment deployments while supporting two UK retail chains operating at 99.9% uptime.
- Engineered WebSocket synchronization across Flutter terminals, kitchen displays, Node.js/Express services, and Redis. Built offline-first SQLite conflict resolution that preserved order integrity through 4+ hour network outages.
- Tuned T-SQL queries and Redis caching to increase capacity from 150 to 250 orders/hour, reduce processing time 40% and API latency 35%, and maintain 85% coverage across 500+ tests.

## Projects

**TransitForge: Boston Transit Resilience Platform** | *PySpark, Airflow, Iceberg, MinIO/S3* | GitHub — 2026 – Present
- Built an Airflow/PySpark platform that ingests six live MBTA and NWS feeds every five minutes and captures complete paginated snapshots with checksums. A verified run processed 2,722 records into 138 explainable station-route resilience scores in 5.6 seconds.
- Designed replayable lakehouse outputs with capture-level partitioning, data-quality quarantine, and 18 automated tests. Validated the Iceberg/MinIO architecture on 3.48M NYC trips at up to 95K rows/second with atomic overwrites and time travel.

**CollabCore** | *Python, FastAPI, PostgreSQL, Pinecone, Docker, AWS* | GitHub — 2024 | Hackathon Winner
- Built a semantic-data pipeline that transformed unstructured profiles into sentence-transformer embeddings and indexed them in Pinecone for cosine-similarity skill-to-project matching.
- Modeled a normalized PostgreSQL database with indexed joins, containerized FastAPI services with Docker, and deployed to AWS through CI/CD with pytest integration tests.

## Certification, Publication & Patent

**SnowPro Core Certified** (2026) | Verify credential
**Publication (Co-author):** "Natural Disaster Management System," IEEE ICCCSMD 2024