Aryan Achar

aryanachar.com | aryan.work2@gmail.com | linkedin.com/in/aryanachar | github.com/aryansvt

Education

University of Texas at Dallas **August 2024 – Present**
Major in Computer Science / Minor in Business Intelligence & Analytics *Richardson, TX*

Texas A&M University **August 2023 – May 2024**
Major in General Engineering *College Station, TX*

Relevant Coursework:
Programming Languages, Digital Logic & Computer Design, Data Structures & Algorithms, AI/Machine Learning, Linear Algebra, Systems Programming, Probability & Statistics, Operating Systems, Computer Architecture, Computer Networks

Technical Skills

Languages: Python, Java, C++, TypeScript, JavaScript, SQL
AI & ML: OpenAI API, LangChain, LangGraph, RAG, Structured Outputs, PyTorch, XGBoost, LightGBM, SHAP
Frameworks & Data: FastAPI, Pydantic, Pandas, Next.js, React, Fastify, PostgreSQL/PostGIS, MapLibre
Tools: Docker, Git, GitHub Actions, Vitest, pnpm, CMake, VS Code, Claude Code, Codex

Work Experience / Internships

UT Dallas — Spatial Data Science Researcher | *Richardson, TX* **September 2026 – Present**
- Research healthcare access gaps in Dr. Alexander Michels' spatial data science group using population and facility data, drawing on PostGIS and access/egress modeling from LineFinder.
- Implement place-based spatial accessibility measures based on PySAL access, including floating catchment area and gravity-based models.

Innowhyte — AI Engineer Intern | *Remote* **Summer 2026 – Present**
- Built a full-stack data analysis app with FastAPI, Next.js, Pandas, OpenAI structured outputs, and Docker for answering natural-language questions across multiple CSVs.
- Engineered an LLM planning pipeline that validates model-generated analysis plans before deterministic Pandas execution, handling data cleaning, cross-file joins, and multi-turn context, with a 27-test regression suite.
- Contributing to a live agentic AI project in Fall 2026 after training in RAG, agent orchestration, evaluation, and LLMOps workflows.

UT Dallas — OIT Support Desk Analyst | *Richardson, TX* **July 2025 – August 2026**
- Supported UT Dallas students, faculty, and staff in real time across phone, email, chat, and remote support channels.
- Troubleshot AWS remote access, Duo, MS Teams, PeopleSoft, TeamDynamix, JIRA, Azure, and hardware/software issues.

Projects

Breadcrumbs | *Python, FastAPI, Redis, TimescaleDB, Claude API, SerpApi, Docker, Vultr* **October 2026**
Hackathon Winner, Vultr (MLH) Track at HackTX 2026 | Devpost Link
- Built an AI-powered SSH honeypot that captured 4,900+ real attack sessions from 20 countries in under two days, using a 60+ command rules engine, per-session copy-on-write filesystem, and Claude API fallback (∼1s latency).
- Integrated SerpApi to turn attacker artifacts into sourced threat-intel dossiers in real time, identifying a live Kaiji botnet infection attempt during judging, with an explainable bot/human/AI-agent classifier mapped to MITRE ATT&CK.
- Deployed a hardened two-server pipeline on Vultr with Redis Streams, TimescaleDB, and egress-locked Docker containers, streaming events over WebSockets to a live 3D globe, backed by 350+ tests.

LineFinder | *TypeScript, Next.js, Fastify, PostGIS, MapLibre, Docker* **September 2026**
- Built an open-source, mobile-first DART transit navigation app with a custom RAPTOR-style routing engine, versioned GTFS ingestion, access/egress planning, and PostGIS storage for 1.9M+ stop-time records.
- Implemented realtime-ready GTFS-Realtime infrastructure, scheduled transfer-risk ranking, and route alternatives in an installable PWA backed by versioned Fastify APIs, caching, tests, and CI.

NBA Shot Quality Model | *Python, Pandas, scikit-learn, XGBoost, LightGBM, SHAP* **April 2026**
- Built an end-to-end ML pipeline on 128K NBA shots to estimate make probability, comparing five model families and tuning LightGBM to 0.64 AUC, with calibration analysis and SHAP explainability.
- Deployed a Next.js dashboard on Vercel with SHAP explainability, an interactive shot predictor, and a player leaderboard ranking 248 players by shot-making over expected, where 46 fell outside 95% chance intervals versus about 12 expected by luck.