

Keshav Sundararaman

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M.S. Computer Science, University of Texas at Arlington

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LinkedIn — GitHub — Portfolio: ikeshav42.dev — Medium

TECHNICAL SKILLS

- **Languages & Querying:** SQL (CTEs, Window Functions), Python (Pandas, NumPy), JavaScript, Bash
- **Data Systems & BI:** BigQuery, Relational Database Design, Databricks, Apache Spark, Matplotlib, Excel
- **Machine Learning:** scikit-learn, Feature Engineering, Supervised Learning, PyTorch (foundational)
- **Tools & Practices:** Git, Linux, Docker, REST APIs, Technical Documentation

EDUCATION

University of Texas at Arlington, M.S. Computer Science Fall 2025 – Summer 2027

- GPA: 4.0 / 4.0 — Coursework: Data Engineering for Business Applications, Database Systems, Machine Learning
- Google Cloud Data Analytics Certificate (in progress) — Stanford ML Specialization (Coursera)

Amrita Vishwa Vidyapeetham, B.Tech Computer Science Oct 2020 – June 2024

- CGPA: 8.06 / 10 — Thesis: Ensemble Machine Learning Pipeline Generation using DSGE

EXPERIENCE

Graduate Research Assistant, UTA Research Institute (UTARI) Jan 2026 – May 2026

- Built an asynchronous pipeline to sync and process RGB/depth streams from ROS bag files, running object detection (YOLO-World), segmentation (MobileSAM), and depth projection into persistent 3D maps.
- Profiled computational bottlenecks across pipeline stages; transitioned detection from GroundingDINO to YOLO-World, boosting frame throughput from <10 fps to 25 fps (+150%).
- Decoupled geometry generation from semantics, building a modular CLI supporting ROS2 Nav2 exports, 2D floor-plan images, annotated video feeds, and serialized JSON summaries.

Research Assistant (Data Ingestion & Analysis), Sony Industry-Academia Project May 2023 – Dec 2023

- Built automated network scripts to continuously ingest raw IoT sensor readings into structured tabular datasets.
- Cleaned and validated multi-sensor experimental logs in Pandas to eliminate sensor noise, drift, and missing entries.
- Analyzed food drying behavior across sensor runs and presented analytical findings and Matplotlib charts directly to Sony representatives and project leads.

PROJECTS

Abnormal Move Prediction in S&P 500 Stocks — GitHub May 2026

- Built an end-to-end ML pipeline in Python analyzing 505 S&P 500 stocks across 619K+ rows of 5-year OHLCV data.
- Engineered 12 rolling volatility and momentum indicators, applying strict temporal split validation to prevent data leakage.
- Evaluated four model families on validation F1; random forest achieved test AUC 0.72 and F1 0.31 at a 2% move threshold, with L1 sparsification isolating primary volatility drivers.

BestPick – Variant Price Extraction Extension — Chrome Web Store — GitHub Sept 2026

- Developed and published a Manifest V3 Chrome extension that scans all listing variants on Amazon product pages to extract and compare pricing across 5 condition tiers (New down to Acceptable).
- Built a 5-worker pool with randomized backoff and semantic text anchors resilient to dynamic DOM markup shifts.
- Shipped v1.1 to the Chrome Web Store within 24 hours of launch to support multi-dimensional variant grids (size/color) and bundle listings based on user feedback.

LEADERSHIP & ACTIVITIES

- **Honeywell Smart City Hackathon Finalist (Top 20 in India, 2021):** Prototyped an assistive product solution designed to improve urban accessibility for people with disabilities.
- **ACM Student Chapter Member:** Participated in peer programming workshops, technical sessions, and developer events.
- **Technical Writing:** Publish articles on Medium (@ikeshav42) explaining data engineering workflows, Python tooling, and analytical concepts.