Gokul Vasudeva

linkedin.com/in/gokulvsd | gokulvsd.github.io | gokul.vasde@gmail.com | (623) 888-9818

EDUCATION

Master of Science in Computer Science — **Expected May 2025**
Arizona State University — **Tempe, Arizona**

Bachelor of Engineering in Computer Science and Engineering — **August 2020**
PES University — **Bengaluru, Karnataka**

TECHNICAL SKILLS

Language & Build - C, C++, Java, Python, Go, Rust, Scala, JavaScript, TypeScript, Bazel, Gradle, NPM, Jenkins, Bash, Groovy, Git
Library - Node, React, Angular, Highcharts, Recharts, Playwright, Express, FastAPI, Flask, Spring Boot, Tomcat, Nginx, Thrift, gRPC
AI - Keras, Tensorflow, PyTorch, Numpy, Pandas, MLPack, OpenCV, Sktime, Kats, Prophet, Greykite, LangChain, LLaMA, CUDA
Cloud - AWS EC2, EKS, ECR, EMR, S3, Glue, Lambda, SageMaker, MSK, RDS, SQS, SNS, Grafana, Elastic Search, Kibana, Splunk
Docker, Kubernetes, Hugging Face, DataRobot, Datadog, Miro, Figma, Tableau, Snowflake, GraphQL, Protobuf, REST, microservices
Data - Spark, Cassandra, Hadoop, HDFS, Kafka, ZooKeeper, Solr, Airflow, PostgreSQL, Redis, MongoDB, Celery, Qdrant, Prometheus

EXPERIENCE

Software Engineering Intern — **May 2024 - August 2024**
Apple — **Cupertino, California**
- Championed and built a new production-ready GenAI platform for ad metrics alerting, attribution, anomaly detection and an elegant modular knowledge recall framework through Retrieval Augmented Generation (RAG), leveraging Apple's foundation models.
- Set up associated OAuth, pipelines for containerization and CI/CD using Jenkins and Spinnaker for production deployments to EKS.

Member of Technical Staff 4 — **February 2023 - July 2023**
ThoughtSpot — **Bengaluru, Karnataka**
- ThoughtSpot is a fast paced BI product company solving natural language search and leveraging Generative AI to unearth insights from data. I was responsible for SpotIQ, ThoughtSpot's AI engine, building and scaling ML based insight generation.
- By the end of my tenure, I drove technical decision making and led efforts to re-architect SpotIQ, with 300+ PRs in one year.
- Working in multiple frontend, backend and ML stacks, I integrated DataRobot end-to-end into ThoughtSpot. Expanded our in-house AutoML engine Cortex to support multi-tenant containerization, designed the data caching layer, data transport and all major flows.
- Designed contextual key driver analysis explaining unexpected changes in customer metrics; leveraged GPT LLMs for prompt engineering insight narratives. Drastically cut down SpotIQ tech debt, resulting in team-wide productivity improvements.

Member of Technical Staff 3 — **August 2022 - January 2023**
ThoughtSpot — **Bengaluru, Karnataka**
- Incubated and built SpotIQ Cortex, a highly scalable general-purpose time series forecasting and anomaly detection service with MLOps for heterogeneous model orchestration, model ensembling, invalidation and retraining on new data ingress.
- Cortex allowed us to dynamically forecast and predict customer KPIs, enabling anomaly based alerting and better insights.
- Conceptualized and implemented custom time period comparison and live monitoring on non-Gregorian time series KPIs.

Member of Technical Staff 2 — **May 2021 - July 2022**
ThoughtSpot — **Bengaluru, Karnataka**
- Made major improvements to SpotIQ's C++ codebase including error tolerance and test coverage. Caught and fixed a large number of critical bugs, allowing for new use cases by increasing query efficiency over CDWs along with SpotIQ's reliability.
- Developed SpotIQ's V2 experience in Java, took ownership of Comparative and R Analysis. Improved schema management in a cron scheduler written in Go. Reduced build times by optimizing rule execution in Bazel. Wrote Jenkins pipelines for data ETL.

Software Engineer — **November 2020 - April 2021**
Societe Generale — **Bengaluru, Karnataka**
- Built an analytics platform on Azure. Created a quiz and survey platform on the MERN stack with asynchronous session persistence.

PROJECT EXPERIENCE

- MonoDAC - A monocular depth estimation system using a modified DeepLabv3+ encoder decoder, employing Atrous Convolutions and ASPP, along with a web platform for real-time wireless image capture, depth inference and 3D point cloud visualization.
- Crypticket - An offline capable cryptographic ticket generation and authentication platform using service workers and local storage caching. Developed as a responsive PWA from scratch using React, utilizing EdDSA elliptic curve cryptography.
- Wuasta - A predictive alarm app that pragmatically rings at the right time, taking into account real-time traffic conditions and historical data. Utilizes Distance Matrix APIs to find the ideal departure time to arrive at another location at a predefined time.
- MidLLaMAI - A benchmarking suite for evaluating the performance of compressed LLaMA models focused on finding an optimal balance between different pruning and quantization techniques with varying number of model parameters.

PUBLICATIONS & AWARDS

Cortex: Mine actionable insights on key metrics from freshly ingested data | US Patent and Trademark Office — **May 2022**
- Co-invented Cortex, a novel paradigm for anomaly detection through time series forecast deviations and AutoML.

R&D Excellence Award | ThoughtSpot — **March 2022**
- Took strong ownership of SpotIQ. Was consistent on high impact deliverables with diligence, customer empathy and agility.

First Place | InGenius Hackathon — **September 2017**
- Built an Android app that utilized Google Maps APIs to find an ideal meet up location considering time-to-reach.

Honorary Award | HP CodeWars — **December 2015**
- Solved the toughest problem in the shortest time, competing against 300+ peers.