Venkata Sai Krishna Gani

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Professional Experience

Software Engineer 3, *Walmart Global Tech*   *August 2024 – Present*

Project: Pixellate - A Geospatial visualization platform (GoLang, gRPC, Postgres, BigQuery)

- Transformed a single-user platform into a multi-user system by implementing user session isolation and synchronization, enabling concurrent report visualization and significantly improving usability.
- Reduced report load times by **60-70%** through caching and implementing gzip compression for large CSV files.
- Led the development of scalable data source integration layer by using Go interfaces that enabled uniform query execution and implementing asynchronous processing non-blocking query execution and real-time status updates

Software Engineer 2, *Walmart Global Tech*   *July 2022 – August 2024*

Project: Dscribe - A Last-Mile delivery insights platform (Python, FastAPI, Postgres)

- Led the development of a low latency real-time notification engine for 150K Walmart drivers for non compliant alerts.
- Engineered a scalable data ingestion pipeline, batch-loading over **27 million records daily** from BigQuery to Postgres, utilizing complex SQL transformations to optimize data for OLTP systems.
- Implemented role-based access control (RBAC) by integrating Walmart's internal SSO and Active Directory groups, mapping users to multiple personas with specific module access

Project: Fencer - Zone Optimisation Automation (GoLang, Gin, Postgres)

- Reduced rezoning time from **3-4 days to just 3 hours**, enabling faster decision-making through process automation.
- Integrated Jira and Apache Airflow APIs, enabling automatic DAG triggers and real-time status checks, improving workflow automation and tracking.
- Designed and modularized reusable connectors for BigQuery, GCS, and PostgreSQL, creating a standardized interface for seamless interaction with these services and reducing development effort across multiple APIs.
- Built high-performance middleware for caching and authorization, achieving a 30% increase in API response speeds.

Other Contributions (Apache Spark, Scala, Hudi, Airflow)

- Spearheaded the migration of Apache Spark ETL workflows to Hudi and rearchitecting the process, reducing daily costs from **$1,300 to $300** and decreasing runtime from 60 minutes to 20 minutes.
- Led the development of ETL pipline for a drive fraud detection initiative, coordinating with internal and external teams to process **10 million images and 500 million records monthly** from Kafka streams and third-party APIs.

Software Engineer Intern, *Kamtech Associates*   June 2021 – Aug 2021

- Developed Bidfast, a tender automation web application using Django, implementing multi-user support and file handling.
- Converted static webpages to dynamic interfaces using jQuery, JavaScript, and AJAX, and creating dynamic, multi-page forms with Django formsets and form factories.
- Automated document generation by integrating Python-docx to replace Jinja tags with database data, and deployed the application using Nginx, Gunicorn, and PostgreSQL

Technologies

Languages: Python, Go, Scala, C++, SQL, Javascript, Bash

Frameworks & Tools: Gin, FastAPI, Apache Spark, Django, Docker, Kubernetes, gRPC, Apache Airflow, Postgres, BigQuery, GCP, Apache Kafka

Education

IIT Kharagpur, Integrated Masters (5Y) [GPA: 7.2/10]   July 2017 – May 2022

- **Coursework:** Programming and Data Structures |Machine Learning Foundations and Applications | Big data Applications

Achievements

- Received **Bravo Award** for managing critical data pipelines and optimizing them.
- Awarded the **Excellence Award**, an annual team-level recognition for significant impact.
- Secured an All India Rank 7320 among 1.5 million participants in JEE ADVANCED 2017
- Secured a State Rank 1058 in AP EAMCET 2017 among 1.5 lakh enrolled aspirants