DUSHYANTH ASRANI GOPAL

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EDUCATION:

University of South Florida, Tampa, Florida.

M.S in Artificial Intelligence and Business Analytics 3.83/4.0 **Expected Graduation**: **May 2026**

Relevant Coursework: Machine Learning, Statistics, Database Management, Development for analytics, Data Visualization, Cloud.

TECHNICAL SKILLS:

Programming: Python (Pandas, NumPy, Scikit-learn, TensorFlow), SQL (Big Query, Redshift, Stored Procs), Bash, Git.
Cloud & Big Data: GCP (Big Query, Dataflow, Pub/Sub, Composer), AWS (S3, Lambda, Glue), Snowflake, Apache Spark.
Orchestration & Modelling: Apache Airflow, ETL (Glue, Dataflow), Data Modelling (star/snowflake schemas, normalization, lineage).
Analytics & ML: Exploratory Data Analysis, Power BI, Tableau, Predictive Modelling (regression, classification), Statistical modelling.
Other Technologies: JIRA, Agile, Docker, Terraform, CI/CD (Cloud Build, Jenkins), IAM, CloudWatch.

RELATED EXPERIENCE:

Data Engineer Intern—Tenet Healthcare **June 2025 – Present**

- Developed and optimized Big Query stored procedures processing GBs of raw data daily, reducing transformation times by 20%.
- Built end-to-end ETL workflows in Apache Airflow & Cloud Composer with 99% pipeline uptime.
- Streamlined the file ingestion framework and report table generation, providing accountable insights for analytics team.
- Automated 5+ Python scripts and Cloud Functions to streamline custom ETL workflow, improving file ingestion efficiency.

Graduate Student Research Assistant—University of South Florida. **March 2025 – May 2025**

- Researched Connected Vehicle data to identify 10+ pedestrian-vehicle conflicts using V2I/V2V, enhancing traffic flow and safety.
- Constructed an interactive Tableau dashboard for real-time roadway telemetry, combining geospatial congestion maps, travel-time metrics, and speed/count visualizations.
- Automated dashboard refresh via SharePoint uploads, enabling new data to update every 5 minutes.

Data Engineer—Accenture. **February 2023 - August 2024**

- Architected and implemented a Snowflake data warehouse, designing star and snowflake schemas and building dimension and fact tables to power supply-chain analytics.
- Created ELT pipelines in Python/Apache Airflow to ingest raw files from AWS S3 into Snowflake staging areas, then transform and load into production schemas.
- Enhanced Snowflake performance with clustering keys, materialized views, and enhanced SQL stored procedures, reducing average query runtimes by 40%.
- Collaborated with analytics teams to define data models, enforce quality checks, and deliver datasets for forecasting dashboards.

Data Analyst Intern/ERP Data Analyst—Cognizant. **January 2021 - February 2023**

- Formulated complex workflows with SAP (BRF+), optimizing master data management processes (Customer, Vendor, Finance), for a pharmaceutical client, resulting in a 21% improvement in system integration across sales, purchasing, and finance systems.
- Created custom reports in ABAP**,** leveraging SAP queries, CDS views, and ALV grids to provide real-time business insights.
- Configured customer/vendor master data management via SAP configuration changes, implementing company code controls and slashed data discrepancies by 25%, improving audit compliance.

Data Analyst Intern—TVS Supply Chains and Solutions. **December 2019 - January 2020**

- Engineered an ETL pipeline with Python for TVS supply chain data, identifying features like toll charges, fuel costs, and web-scraped data; reduced reporting errors by 22%.
- Conducted exploratory data analysis (EDA) using statistical techniques and visualizations in Matplotlib and Seaborn, identifying correlations, seasonal patterns, and outliers that influenced logistic costs.
- Implemented a cost-optimization model using regression, reducing shipping expense by 15% through enhanced logistics planning.

RELEVANT PROJECTS:

Privacy-Preserving LM Classification on CH-MNIST. **March 2025 – April 2025**

- Led development of a privacy-preserving ResNet pipeline on CH-MNIST, designing a robust target/shadow/train/hold to evaluate membership inference risk, reducing attack AUC from 0.74 to 0.50 within one experiment cycle.
- Trained models with and without differential privacy using Opacus DP-SGD, achieving 95% accuracy (non-DP) vs. 84% (DP), showcasing the privacy-utility trade-off while securing against adversarial data inference.

GutMeal—Unlock the power of Gut **July 2024 – August 2024**

- Built an AI Pharmacological model to predict meal plans using gut microbe data, utilizing XGBoost and Statistical Modeling for feature selection, resulting in 78% accuracy.
- Integrated food allergy considerations into the predictive model, enabling personalized meal recommendation and enhancing practical application in 80% dietary planning.
- Transformed raw pharmacological data using quantitative methods, including categorization and one-hot encoding on large dataset, which improved the model's precision by 5% in predicting personalized plans.

Spending Based Advertising with S-ARIMA **January 2019 - March 2019**

- Applied S-ARIMA for time series forecasting, increasing ad relevance by 10% through optimal targeting based on consumer spending trends.
- Established a data collection system that boosted participant engagement by 40%, ensuring the reliability of financial insights for more accurate analytics. Secured the “Best Content” award in two hackathons.