Jayanth Dasamantharao

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EDUCATION

Rutgers University, *Masters in Data Science* — *Sept 2022 - May 2024 | New Brunswick, NJ*

Relevant Coursework: Statistics: Statistical Modeling and Computing, Stat Learning; Neural Networks, Machine Learning, Data Structures and Algorithms(Python), Data Wrangling (R), NLP, Data Mining. Projects Overview: Portfolio.

Andhra University, *B.Tech in Electrical and Electronics Engineering* — *2017 - 2021 | Visakhapatnam, India*

TECHNICAL SKILLS

Programming: Python(problem-solving), R, Scala, Linux. **Quantitative Analysis:** ggplot(R), Tableau, Statistical Modeling, A/B Testing & Causal Inference, Hypothesis testing, Bayesian Statistics, Predictive Modelling, SAS.

Deep Learning(DL): Convolutional & Deep Neural Networks, NLP, LLM's, Computer Vision, AI, BERT, GANs.

Machine Learning (ML): Regression, Time Series Analysis, Ensemble Methods, Gradient Boosting trees, MLOps.

ML & DL Tools: Pandas, Numpy, TensorFlow, NLTK, Keras, Hugging Face Transformers, spaCy, Pytorch, OpenCV, Yolo.

Data Engineering: SQL, Data Warehousing, Spark, Hadoop, AWS(Athena,Redshift,Lambda,S3), GCP(BigQuery, Cloud Storage, Dataproc), Snowflake, Airflow. **Data Analytics:** Tableau, Shiny, Matplotlib, Seaborn, Data Wrangling, ETL.

PROFESSIONAL EXPERIENCE

Data Science Intern, *Harvest Software Solutions, LLC* — *June 2023 - Sept 2023 | Jacksonville, Florida*
Real-time Ad Campaign Optimization:

- Utilized Aniview **APIs for real-time data extractions** & managed a dataset comprising over 5M rows. Conducted **Exploratory Data Analysis (EDA)**, integrated Cost Per Mile (CPM) metrics for detailed performance evaluation.
- Leveraged **hypothesis testing** alongside visualization and statistical analysis to gain comprehensive performance insights.
- Implemented **predictive modeling** techniques, employing **XGBoost** for minimal MSE and implementing **k-fold cross-validation** to prevent overfitting. Additionally, leveraged **H2O's AutoML** for automated model selection.
- **Skills obtained:** EDA, Data Visualization, Hypothesis testing, Machine Learning, Predictive Modeling, Automation.

Application Development Associate, *Accenture Solutions Pvt Ltd* — *June 2021 - Aug 2022 | Hyderabad, India*
Database Analyst, Regeneron Inc - Client Data Analysis & Warehousing

- Conducted client **data analysis** utilizing **Amazon Athena and Amazon Redshift** for efficient querying and analysis. Employed **ETL techniques** to optimize data management processes, leading to a 50% decrease in support calls.
- Created automated **data pipelines with pandas**, boosting efficiency by 40% and cutting errors by 50%. Efficiently managed tasks and updates in **JIRA**, ensuring effective teamwork and timely issue resolution.
- Streamlined data management processes in **data warehousing** and improved system reliability by 15% through **DDL updates and deployment strategies**, augmented by **Tableau** for advanced data visualization.
- Crafted **SQL queries** proficiently using SQL Workbench for data manipulation and analysis. Coordinated cross-team collaboration for **deployments on production servers**, ensuring seamless integration and optimal system performance.

Research, *Andhra University* — *January 2021 - June 2021 | Visakhapatnam, India*
Self Driving Cars Using Image Processing and Deep Learning

- Developed and deployed self-driving technology using **AI, Computer Vision, and Neural Networks**. Applied machine learning techniques like **data augmentation** to prevent overfitting and improve model accuracy.
- Implemented advanced **image preprocessing techniques**, including color space conversion and Gaussian blurring. Integrated Flask backend and real-time communication via sockets for parameter monitoring in **Unity3D simulation**.
- Incorporated **Hough Transform** for precise lane detection and **Neural Network Regression Algorithms** for actuation and localization in Advanced Driver Assistance Systems **(ADAS)**. Employed supervised learning and neural networks for image processing and continuous value prediction in ADAS. Advanced sensing technologies were deployed for data collection.

RESEARCH PROJECTS

[**Bayesian Networks, PyMC3, Informative Prior Distributions**] Designed Bayesian logistic regression models in PyMC3 for diabetes prediction, utilizing informative priors. Evaluated performance with recall and F1-score metrics, comparing uniform and normal distribution priors. *Bayesian Classification on Diabetes data.*

[**Hugging Face transformers, Naive Bayes, Logistic Regression, BERT, N-Grams, GloVe embeddings**] Developed using Naive Bayes, Logistic Regression, and DistilBERT, achieving 89% baseline accuracy globally. Enhanced precision to 94% with DistilBERT, incorporating n-grams analysis. *Language Identification.*

[**PostgreSQL, MongoDB, Python, Sorting techniques, Search Engine Optimization, Django**] Created a user query-responsive tweet retrieval system by integrating dual databases: Postgres for user data management and MongoDB for tweet storage. Optimized data storage and retrieval efficiency by 35% while implementing advanced caching strategies for superior system performance. *Twitter Search Application.*