# NARESH KUMAR MANICKAM

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#### **EDUCATION**

University of Central Florida
Master's in Data Analytics | GPA: 4/4

Data Science Expertise

- Machine Learning
- Statistical Analysis
- Data Visualization
- Data Mining & Warehousing
- Big Data & Cloud Computing

- Statistical & Mathematical Skills
- NIP
- Parallel Computing
- Data Manipulation & Analysis
- Data Storytelling

Jul 2016 - May 2020

Aug 2023 - Present

Sri Krishna College of Engineering & Technology

B. Tech Information Technology | GPA: 3.5/4

• Specialization in information systems, software development, database management and networking.

### **TECHNICAL SKILLS**

Languages: Python, SQL, R, MySQL, PostgreSQL, C, C++, Julia, SAS, Java and JavaScript

Cloud & Databases: Google cloud, AWS, Azure, Docker, Oracle Database, T-SQL, MongoDB, Neo4j.

Technologies & Frameworks: Flask, Django, Pandas, NumPy, Matplotlib, Seaborn, AWS.

Developer Tools: Git, Azure, AWS, Jupyter Notebook, Power BI, Tableau, Excel (Advanced)

Data Science & Machine Learning: Clustering, Tree-Based Methods, Neural Networks.

Data Engineering & Big Data: Apache Airflow, Apache Spark, Hadoop, Databricks, Snowflake.

### ADVANCED ANALYTICS EXPERIENCE

## **Software Engineer | Cognizant Technology Solutions**

Dec 2020 - Jul 2023

- Performed ETL with data cleaning and statistical analysis (Hypothesis Testing, Regression) using SQL and Python, building data pipelines with SSIS, and implementing data validation to ensure accuracy. Utilized AWS S3 for data storage and Airflow for workflow automation, improving forecasting and operational efficiency by 20%.
- Worked in data mining and predictive machine learning using Apache Spark, pandas, NumPy, TensorFlow, and scikit-learn, delivering insights on market trends, risk-return analysis, and portfolio optimization. Created visualizations using Matplotlib that improved investment strategy performance by 18%.
- Optimized data warehouses using Amazon Redshift and Google BigQuery, improving query performance by 25% and enabling real-time business insights.
- Worked in relational database management and executed complex SQL queries with joins and CTEs in Snowflake to transform and report on large-scale financial data. Used Alteryx for data preparation and workflow automation, built Power BI dashboards for financial performance insights, tracking KPIs such as revenue growth, cost reduction, and ROI. Utilized advanced Excel (VBA macros, pivot tables, VLOOKUP, Power Query) for analysis and created detailed reports using SSRS to communicate findings to stakeholders.
- Strong analytical and problem-solving skills. Collaborated effectively and communicated insights to drive decisions. Used Power Automate for request management and workflow automation.

### Research Assistant | University of Central Florida

- Applied supervised and unsupervised learning algorithms (linear regression, decision trees, clustering) using
  TensorFlow and AWS SageMaker to train and deploy models on large datasets. Used SageMaker's automated
  training and tuning to derive insights and optimize predictive modeling for ongoing research in data analysis.
- Collaborated with faculty and graduate students to design, implement, and test machine learning models for
  projects focused on time-series forecasting, anomaly detection, and classification, improving model accuracy
  by up to 15%. Created impactful presentations in PowerPoint to communicate model findings and insights.

### **DATA SCIENCE PROJECTS**

## Predictive Weather and Sea State Model | A Large Aerospace Company

Developed an Al-powered ABM simulation model for weather and sea state forecasting using historical data from NOAA, FAA, and AIS. Implemented a Django-based API integration for predictive requests, utilizing SQL/NoSQL databases for storage and data extraction with Beautiful Soup for automated web scraping.

#### **Diabetes Prediction Model**

Developed a machine learning model using Python and TensorFlow to predict the likelihood of diabetes based on medical data. Trained using Logistic Regression and Random Forest algorithms, achieving high accuracy through hyperparameter tuning and visualized model performance and insights using Tableau.

#### **Movie Recommendation System**

Created a movie recommendation system that analyzes user preferences (ratings, watch history) and suggests movies using cosine similarity. Built with Python, pandas, and scikit-learn, the system calculates movie similarity based on genres, ratings, and features, delivering personalized recommendations.