# JAYA PRAKASH NARAYANA RAAVI

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## TECHNICAL SKILLS

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|---|---|
| **Data Engineering** | : Python, SAS, SQL, R Programing, Kafka, Spark, Snowflake, Databricks, ETL/ELT Data Pipelines. |
| **Databases** | : MySQL, MongoDB, RDS, Big Query. |
| **BI Tools** | : Microsoft Excel (Advanced), Power BI, Data Studio, Tableau, Alteryx, Looker, DAX. |
| **Machine Learning & AI** | : Pandas, Scikit-Learn, TensorFlow, PyTorch, Deep Learning, CNN |
| **Cloud & Infrastructure** | : Azure, GitHub, Docker, Kubernetes, Terraform, Jenkins, Linux |
| **LLM's &APIs** | : OpenAI, Data Mining with LLM's, REST APIs, JSON, XML, Webhooks, Postman |

## EXPERIENCE

**Research Specialist at University of Memphis**                                  May 2025 – present

- Built and optimized scalable ETL pipelines to collect, clean, and transform large datasets using **Python** and **SQL**.
- Designed and managed **Snowflake data warehouses** to support analytics, reporting, and machine learning workflows.
- Collaborated with cross-functional teams to define data models, validate inputs, and ensure high data integrity.
- Automated data ingestion and transformation using **Airflow** and containerized environments for scalability.
- Implemented data quality checks and monitoring frameworks to maintain reliable, production-ready datasets.
- Optimized Snowflake queries and warehouse performance, improving processing efficiency and cost control.

**Data Analyst at University of Memphis**                                  Nov 2023 – Sept 2024

- Cleaned and processed over 2M records, improving data accuracy by 95% and reducing errors by 80%.
- Implemented a dashboard for more than 20 planners that visualized population, household, employment, and land usage data across Tennessee regions using **R** and several libraries.
- Analyzed datasets to identify patterns and trends, providing actionable insights that enhanced research project outcomes.
- Constructed 10+ dashboards and visualizations using **Power BI** and **Tableau**, effectively communicating key findings.
- **Python** and **MATLAB** were used to automate 70% of data processing tasks, increasing output and reducing labor hours.
- Employed VISSIM scripting for traffic data simulation and modeling for 30+ miles, improving accuracy by 25%.
- Collaborated with research teams to understand data requirements, translating them into insightful analytical reports that informed decision-making.

**Business Intelligence Developer at Innovapath, INC**                                  Jul 2021 – Nov 2022

- Designed and maintained web-based dashboards using **React.js**, making sure they are compatible with cross browsers.
- Built interactive data visualizations using D3.JS and Power BI, making the dashboards easy to understand and use.
- Developed RESTful APIs using **Node.js** and **Express.js**, connecting them to **MongoDB** for storing and retrieving data.
- Used **Git** for version control and participated in Agile processes like sprint planning and daily meetings.
- Worked closely with developers, data analysts, and designers to add new features and improve existing ones, contributing to code reviews and discussions.

## PROJECTS

**Database Design for Referral Management**                                  Mar 2024 - Jul 2024

- Created and constructed a **MySQL** database to facilitate client follow-ups and referral management.
- Automated the entire data collection and processing process using **Python**, reducing manual work.
- Composed real-time dashboards in **Power BI** to give team members clear insights into referral trends and follow-up results, helping them make better decisions. Improved the speed of database queries by optimizing how data is retrieved.
- Worked with the team to ensure data security and meet project needs.

**Tennessee Statewide Land Use Dashboard**                                  Feb 2024 - Apr 2024

- Designed an interactive **R-based dashboard** to analyze and visualize Tennessee's population and land use data.
- Conducted extensive data wrangling, merging geographic shapefiles with land-use datasets to ensure consistency.
- Produced through land, home, employment, and population visualizations for different regions and MPOs, enabling insights based on data.
- Implemented dynamic filtering on specific regions, categories, demographics, enhancing decision-making capabilities.

## EDUCATION

**Master of Science, University of Memphis, Tennessee, USA  CGPA (3.88 / 4)**                                  Jan 2023- Dec 2024
Master's in data science with a minor in Bio-statistical learning

**Bachelor of Technology, JNTUA college of engineering Pulivendula, INDIA  CGPA (3.92 / 4)**                                  June 2018- May 2022
Bachelor's in electrical and Electronics Engineering with a minor in Computer Science

## CERTIFICATIONS

- **Published a research paper in Transportation Research Board (TRB)** Hybrid Optimization of Wiedemann 99 Car-Following Parameters for Accurate Calibration of Microsimulation Model for Tennessee's Peak-Hour Freeway Traffic.
- **IBM Data Science Basics** covers the fundamental aspects of data science, various roles within the field, the data analysis process, big data, machine learning, deep learning, and artificial intelligence.