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## EXECUTIVE SUMMARY

**Purpose-driven Data Science enthusiast** with hands-on experience in building and deploying ML models in **healthcare, finance, and e-commerce**. Skilled in **Python, ML/DL, Streamlit, and cloud tools**. Delivered end-to-end solutions with **model accuracies up to 95%**, leveraging **MLflow, YOLOv5, and hyperparameter tuning**. Proficient in **EDA, model evaluation**, and handling both **structured and unstructured data**.

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## PROFESSIONAL EXPERIENCE

### Process Executive

*Omega Healthcare Management Services, Tiruchirappalli, Tamil Nadu, India*

**Jul 2023 – Sep 2024**

- Ensured 99% accuracy in managing sensitive healthcare and insurance data (HIPAA-compliant).
  - Optimized data validation workflows, reducing turnaround time by 10%.
  - Utilized Excel and internal tools for data auditing, reporting, and issue resolution.
  - Acquired domain knowledge in healthcare to support future data-driven projects.
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## EDUCATION

### B.Sc. in Physics

*St. Joseph's College, Tiruchirappalli*

**Graduated:** 2023

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## TECHNICAL SKILLS

- **Programming:** Python, SQL
  - **Data Analysis:** Pandas, NumPy, OpenCV
  - **Machine Learning:** Scikit-learn, XGBoost, Random Forest, Logistic Regression, Decision Trees
  - **Deep Learning:** TensorFlow, Keras, CNN, RNN, ResNet, VGG16
  - **Computer Vision:** YOLOv5, Image Preprocessing
  - **NLP:** Text Preprocessing, Tokenization
  - **Visualization:** Matplotlib, Seaborn, Plotly
  - **Deployment & Tools:** Streamlit, MLflow, Git, Jupyter Notebook, Google Colab
  - **Core Concepts:** EDA, Supervised & Unsupervised Learning, Feature Engineering, Model Evaluation, Hyperparameter Tuning
  - **Soft Skills:** Communication, Problem Solving, Domain Adaptability (Healthcare, Finance, E-commerce)
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## PROJECT EXPERIENCE

### Mental Health Survey Prediction using Neural Networks

- Developed and deployed a Keras-based neural network in Streamlit to predict mental health outcomes from survey data with 88% accuracy using dropout regularization.

🔗 [GitHub: https://github.com/Saravanan9698/Mental\\_Health\\_Survey](https://github.com/Saravanan9698/Mental_Health_Survey)

#### Smart Premium – Insurance Cost Prediction using ML

- Built and deployed a regression model in Streamlit to predict insurance premiums with 0.91  $R^2$ , using MLflow for tracking and hyperparameter tuning.

 [GitHub: https://github.com/Saravanan9698/Smart\\_Premium](https://github.com/Saravanan9698/Smart_Premium)

#### Zomato Data Insights – Restaurant Analysis & Recommendation System


- Built a Streamlit web app using Python and SQL to analyze Zomato restaurant data, uncovering insights on ratings, pricing, and cuisines for user-friendly exploration.

 [GitHub: https://github.com/Saravanan9698/Zomato\\_Data\\_Insights](https://github.com/Saravanan9698/Zomato_Data_Insights)

### KEY DATA SCIENCE PROJECTS

In addition to the major projects listed below, I have independently worked on the following data science projects:

- Customer Conversion Analysis (Clickstream Data)
- YOLOv5 X-ray Chest Condition Detection
- Personal Expense Tracker & Analysis
- CricSheet IPL Match Data Analysis

 Explore more projects on GitHub: <https://github.com/Saravanan9698>

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### CERTIFICATIONS

• **GUVI HCL Skill-Up Level 1 Certification**- Offered in collaboration with IITM Pravartak, CLIE, and Google for Education Partner. Recognized for foundational technical skills in programming and data handling.

• **GUVI Master Data Science Programme**- Gained practical experience in data science tools, machine learning, and industry-relevant project execution.