

RAMASWAMY IYAPPAN

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SKILLS

Languages: Python, SQL, Git, Javascript, Java, Linux

Frameworks & Libraries: PyTorch, TensorFlow, Scikit-Learn, Numpy, Pandas

Data Platforms & Tools: PostgreSQL, Snowflake, Tableau, VSCode, MS Excel

DevOps: AWS, CI/CD, Kubernetes, Docker

Concepts: Deep Neural Networks, Data cleaning, EDA, Database & Data Warehousing, Cloud Computing

Certifications: IBM Data Science Professional, Google Data Analytics Professional, AWS Certified Developer Associate, Solutions Architect Associate & Cloud Practitioner

EDUCATION

George Mason University

Master of Science in Computer Science

Jan 2022 - Dec 2023

Fairfax, VA

Vels University

Bachelor of Science in Computer Science

Aug 2016 - May 2020

Chennai, India

EXPERIENCE

Data Science Intern

US LBM

Jan 2023 - Dec 2023

Dallas, TX

- Developed **demand forecasting models** for a leading national distributor, achieving a **MAPE** of less than **20%** for over **70%** of SKUs using a **Stacking Ensemble** approach.
- Employed advanced time series forecasting methods, including ARIMA, XGBoost, and Auto Deep AR, to **forecast sales up to 1 month** ahead at various granularity levels.
- Utilized **Snowflake** for data processing, reducing the data preparation time by **30%**.
- Implemented **clustering techniques** to improve modelling time for per-instance based models and improve **MAPE** for **neural network**-based forecasts.
- Presented forecasting results to stakeholders using **Tableau**, enabling clear and actionable insights for demand planning and supply chain optimization.

PROJECTS

Credit Card Fraud detection | *Python, Pytorch, Tableau, Ensemble modeling*

Mar 2023

- Preprocessed unstructured data through EDA, resulting in a **20% improvement** in model performance
- Identified and addressed class imbalance issue, leading to a **95%** increase in minority class detection
- Implemented RandomForest ensemble learning, achieving an **AUC-PR of 0.88**, which translates to a significant improvement in fraud detection rate

Hand-written digits Prediction | *Python, PCA, t-SNE, Dimensionality Reduction*

Nov 2022

- Built a **K-Means clustering** model with t-SNE visualization, achieving an accuracy of **0.86**
- Analyzed high-dimensional digit features and reduced them by **65%** using **PCA & t-SNE** techniques

Heart-Disease Prediction | *Python, Feature Scaling, Supervised Learning*

Apr 2022

- Developed **Logistic Regression** model using Gradient Descent to predict heart-disease risk
- Addressed overfitting through **L1/L2 regularization**, leading to an **10%** accuracy improvement

Survey-form Web Application | *Angular, SpringBoot, Jenkins, Docker, SQL*

Feb 2022

- Reduced deployment time by **50%**, enabling rapid and reliable updates to the **AWS EC2**-hosted application
- Implemented **Kubernetes Load Balancer** to distribute traffic across 3 pods, boosting availability to **99.9%**

LEADERSHIP AND AWARDS

Marketing Employee of the Year, *Mason Recreation*

Jun 2022 - May 2023

NCC Cadet Award, *Cleared 3 Rifle rounds*

Sep 2013

Manager On Duty, *Mason Recreation*

Piano/Music Instructor (*6+ yrs*)