

RAMASWAMY IYAPPAN

📍 Fairfax, VA 📞 571-478-3766 ✉️ riyappan@gmu.edu 💻 github.com/ramiyappan

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 Jan 2022 - Dec 2023
Master of Science in Computer Science Fairfax, VA
• **Relevant Coursework:** Data Mining, Machine Learning, Advanced NLP, Analysis of Algorithms, DevOps, Linear Algebra, Statistics and Probability, Web Development.

Vels University Aug 2016 - May 2020
Bachelor of Science in Computer Science Chennai, India
• **Relevant Coursework:** Data Structures, Software Design, Object Oriented Programming, Differential Calculus.

EXPERIENCE

Graduate Teaching Assistant Aug 2023 - Dec 2023
George Mason University Fairfax, VA
• Instructed & facilitated the Principles of Computing course, conducted weekly office hours, assessed assignments, and provided personalized support to over 60 students for enhanced performance.

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.

MNIST Digits Classification | Python, TensorFlow, PyTorch, Deep learning Dec 2022
• Achieved state-of-the-art accuracy (98%) on the MNIST handwritten digits dataset using **Neural Networks**.
• Reduced validation loss by 16% through mini-batch training and **hyperparameter tuning**.

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 8% accuracy improvement and a better bias-variance trade-off.

Survey-form Web Application | Angular, Springboot, Javascript, jQuery, Kubernetes, AWS Feb 2022
• Built and deployed a microservices-based survey application using **CI/CD** pipeline (Jenkins & Docker) on **AWS**.
• Reduced deployment time by 40%, enabling faster feature releases and better user experience.

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)