

Ramaswamy Iyappan

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EDUCATION

- **George Mason University** Fairfax, VA
Masters in Computer Science 2022 - 2023
- **Vels University** Chennai, India
Bachelor of Computer Science 2016 - 2020

SKILLS

- **Programming:** C, Java, Python, PyTorch, Postgres, MySQL, HTML-CSS, JavaScript, Angular, jQuery, AJAX, JSON, Linux
- **DevOps:** Kubernetes (Rancher), Docker, RESTful Web Services, AWS (S3, RDS, ECS), Springboot, Jenkins
- **Tools & Technologies:** VSCode, Eclipse, Google COLAB, GitHub, Jupyter Notebook, Spring Tool Suite, MS Office, Matlab

EXPERIENCE

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

COURSE WORK

- **Mathematics:** Mathematical Foundations of CS, Differential Calculus, Linear Algebra, Statistics and Probability
- **Computer Science:** Data Mining, Machine Learning, Advanced NLP, Systems Programming, Software Design, Analysis of Algorithms, Object Oriented Programming, Component-based software development and World Wide Web Development

CERTIFICATIONS

- **AWS Certified Developer - Associate** Expires - 2027
Skills: AWS CI/CD, Lambda, Cloudformation, Cloudwatch, API Gateway, DynamoDB, SQS, SNS, Kinesis
- **AWS Certified Solutions Architect - Associate** Expires - 2026
Skills: Hands-on, Compute, Networking, Storage, Databases, Migration, Resilient & Cost-effective architectures

ACADEMIC PROJECTS

- **Machine Learning**
 - **Credit Card Fraud (Anomaly Detection):** Implemented ensemble learning models, applied evaluation metrics. Achieved AUC-PR of 0.88 using RandomForest with class imbalance handling. (Dec '22)
 - **Digits Classification (Deep Learning):** Explored different activation functions (*Sigmoid, ReLu, Tanh*), mini-batch training, & hidden-layer settings. Achieved 98% accuracy using PyTorch for hand-written digit classification. (Nov '22)
 - **Spam Classifier (Generative Model):** Implemented Naive Bayes with Laplace Smoothing and Multinomial event model for Spam email identification. (Oct '22)
 - **Hand-written digits Prediction (Unsupervised Learning):** Improved accuracy to 0.86 using K-Means Clustering and t-SNE. Utilized elbow-plot and PCA for dimensionality reduction. (Apr '22)
 - **Heart-Disease Prediction (Supervised Learning):** Developed Logistic Regression model using Gradient Descent and optimized parameters for 0.87 accuracy using Feature scaling. Explored Over-fitting, and Bias-Variance Trade off. (Feb '22)
- **DevOps**
 - **Microservices-based Application:** Built SpringBoot and Angular application (Survey-form) with Kubernetes deployment on AWS EC2 using Docker and Jenkins for CI/CD pipeline. (May '23)

EXTRA-CURRICULAR

- Oversaw day-to-day operations of a 120,000 sq.ft. facility at Mason Recreation, GMU, while concurrently leading a team of 20 employees as a part-time Manager On Duty & Marketing Brand Ambassador. (Jun 2022 - Sept 2023)
- Piano and Music Instructor since 2017, teaching for over 6 years.
- National Cadet Corps (Student military) participant, awarded for clearing 3 Rifle rounds in a row in 2013, India.

HONORS AND AWARDS

- Achieved comprehensive proficiency in Piano by completing all 8 Grade exams under *Trinity College of Music*, London, in 2019.
- Recognized as the Marketing department's *Employee of the Year* in 2023 at Mason Recreation for exceptional contributions to team success and outstanding performance.