AARTHY RAMESH

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SUMMARY

Machine Learning and Data Science student working towards an MS at UC San Diego. 3+ years of experience in full-stack software development and familiarity with software engineering best practices. Interested in building and working with Machine learning models.

EDUCATION

University of California, San Diego MS, ECE (Machine Learning and Data Science) **Sep 2021-Apr 2023**

Courses: Python for DS, Statistical learning, Probability and statistics for DS

National Institute of Technology, Trichy BTech, Electronics and Communication Engineering **May 2014 - Apr 2018**

Graduated First Class with Distinction – CGPA – 8.83/10

Courses: Pattern Recognition, Data Structures, Programming in C, Probability and Random Processes

MOOC courses: Machine learning - Andrew Ng, Deep Learning Specialisation - Andrew Ng (In progress)

WORK EXPERIENCE

Fidelity Investments, *Software Engineer* **July 2018 - July 2021**

Developed responsive web pages for Fidelity's health insurance enrollment application using JAVA, Angular, Javascript

- Mentored the first team to migrate a legacy application from JAVA to NodeJS
- Contributed to several DevOps initiatives including migration to AWS and containerization, integrating with Sonar, building CICD Jenkins pipelines, and increasing code coverage across apps to 80%
- Won the 'You've Earned It' award for my contribution to a data setup application that increased efficiency by 50%

Learning and Extraction of Acoustic Patterns (LEAP) lab, IISc, Bangalore — *Summer Research Intern* **May - July 2016**

Detected spoofing attacks on Automatic Speaker Verification Systems

- Built an ASV system using i-vectors and GPLDA scoring and benchmarked its efficiency against spoofing attacks and co-authored a paper which was presented at the ICASSP 2017 conference **(https://ieeexplore.ieee.org/abstract/document/7953185)**

PROJECTS

Automatic Music Tagging Nov 2021

- Used the Spotify playlist labels as target tags and classified songs using MFCC features and deep learning models

Image Segregation using Bayes Decision Rule Oct 2021

- Segregated the image into foreground and background in Matlab using various parameter estimation methods for a multivariate Gaussian model and Bayes Decision Rule using Matlab. Achieved a best case error probability of 5%

Music Generation using RNNs Oct 2021

- Trained an LSTM on popular rock guitar riffs and used the trained model to generate new music.

Techstack: Tensorflow, Jupyter, Python, music21

Dengue Prediction June 2021

- Built a Dengue prediction system based on weather data. Compared several models including GLM, time series modeling techniques like AR and ARIMA, LSTM neural network and achieved a loss of 25 percent

Techstack: Tensorflow, Jupyter, Python, pmdarima, numpy, scikitlearn, matplotlib

Book Recommender System May 2021

- Built a collaborative filtering based book recommender system using Python, Jupyter notebooks and deployed it using Flask (https://stark-brook-74726.herokuapp.com/)

SKILLS

Java, Python, Javascript, C, NodeJS, Jupyter, Anaconda, AWS, VSCode, Eclipse, Android Studio, MATLAB**,** Angular, Pandas, Numpy, Scikit-learn, Tensorflow, Docker

EXTRACURRICULARS

- Member of Women In Computing (WIC), UCSD
- Member of ECE Graduate Student Council, UCSD
- Volunteer, Bhumi Ignite Project - Taught robotics to underprivileged middle school students
- Member and Project Manager, Robotics and Machine Intelligence Club – NIT Trichy