Mahadev Mahesh Maitri

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Education

University of Delaware — Newark, DE
Master of Science in Computer Science — 2022 – 2024

R. V. College of Engineering — Bengaluru, India
Bachelor of Engineering in Electronics and Communication Engineering — 2016 – 2020

Relevant Experience

Optum Global Solutions (India) Private Limited – UnitedHealth Group — Bengaluru, India
Associate Software Engineer - II — Jul 2020 – Jul 2022

- Designed and developed User Interfaces using ReactJs for the Integrated Eligibility (IE) project (Nov 21 – Jul 22) when features were requested and give a demo to the Business Team after completion of features.
- Developed an end-to-end functional regression testing suite using Robot Framework along with performance testing of REST APIs using JMeter for development servers in the Optum Medicaid Management Services (OMMS) project (Jun 2020 – Oct 2021).

Research Experience

Electronics and Radar Development Establishment (LRDE), DRDO — Bengaluru, India
Trainee — Jan 2020 – May 2020

- Designed a state-of-the-art solution for Automatic Target Recognition of ships using Deep Learning algorithms. Constructed GAN framework (2.87M parameters) with help of CNNs to extract features, like the amplitude of signals, mast, and orientation, to increase the number of ISAR images of ships in the dataset. Utilized transfer learning method for classification of ships which was backed by MobileNetV2 network with an accuracy of 89.6%.
- The original dataset of ISAR images was generated using ANSYS Electromagnetics SBR+ with 3-D models of ships.
- Published a paper on "Classification of Ships using ISAR Images with Combined Deep Transfer Learning and GAN Processing Framework", International Journal of Engineering Research & Technology (IJERT) Volume 10, Issue 10 (October 2021).

Wipro IISc Research Innovation Network (WIRIN), IISc — Bengaluru, India
Project Intern — Jun 2019 – Jul 2019

- Implemented an image processing technique to improve the inference timing and frames per second for an input video stream to an existing semantic segmentation algorithm by using sequence-by-sequence batch augmentation of video frames and reducing computational complexity.

Projects

Movie Booking System
ReactJs, MySQL — Jan 2019 – Apr 2019

- Worked with a team of two and was responsible for developing the front end of the application using ReactJs. The backend was developed using Express.js in connection to the MySQL server on Azure. Each of the services was deployed separately to understand microservices and their benefits.

Class Attendance Application based on Facial Recognition and Cognitive Services
Android, Java, Azure Face API — Aug 2018 – Nov 2018

- Developed an android application to mark the attendance of a class based on the image taken of an entire class and utilized Azure cognitive services Face API to identify matching faces registered for that class. (Individual Contribution)

Detection of Common Plant Diseases using Convolutional Neural Network
Python, PyTorch, Numpy, Pandas, Scikit-Learn — Aug 2018 – Nov 2018

- Addressing the issue of common plant diseases at an early stage to inform farmers at the right time by designing a state-of-the-art solution using a Convolutional Neural Network to detect diseases and suggest appropriate weedicides. This project was shared with a team of two and was responsible for the collection and pre-processing of the dataset, and building the classifier using CNN.

Technical Skills

Programming Languages: Python, C/C++, JavaScript, TypeScript, HTML/CSS, SQL
Frameworks: ReactJs, Bootstrap, Redux, Robot Framework, JMeter, Jenkins, PyTorch
Developer Tools: Git, Chrome Developer Tools, VS Code

Achievements

- Published a paper on "Face Aging Through Uniqueness Conserving by cGAN with Separable Convolution" in Sustainable Communication Networks and Application, Proceedings of ICSCN 2020.
- Secured the second place out of 30 participating teams in Hackathon (Blockchain Hackathon 2019) organized by NextGrids and powered by JUiNCUBATOR, a TBI supported by DST, Government of India and JAIN(Deemed-to-be-University).
    - Built a Machine Learning model for Speech Recognition (offline) with help of Recurrent Neural Network and implemented an Android Application using the same model's lite version for efficient computation as demo which could be implemented in medical appliances.
- Secured the first place out of 50 participating teams in Hackathon (Stay Late And Code, 2019) conducted by Amrita School of Engineering sponsored by General Electricals Healthcare.
    - Built a smart contract using Ethereum for verification of employee background check and deployed on to IBM Blockchain platform. To demonstrate, we developed a sample Angular website to perform the transactions.
- A finalist (from 70 teams) in India Police Hackathon 2019 organized by Karnataka State Police at R. V. College of Engineering.
- A finalist (from 30 teams) in Hackathon (TECHATHLON 2018) conducted by Curl Analytics in association with Coding Club of RVCE.

Training and Certifications

- Structuring Machine Learning Projects from Coursera. (2020) (Link: https://coursera.org/account/accomplishments/certificate/2JGT88YLP7AR)
- Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization from Coursera. (2020) (Link: https://coursera.org/account/accomplishments/certificate/Z4L6ZPBD5XQT)
- Neural Networks and Deep Learning from Coursera. (2020) (Link: https://coursera.org/account/accomplishments/certificate/XCLPC88BC5N3)
- Machine Learning Basic Nanodegree from Udacity India. (2018) (Link: https://confirm.udacity.com/RSXCMEGL)
- Android Foundation Nanodegree II from Udacity India. (2018) (Link: https://confirm.udacity.com/HJP5C35N)