HARIHARAN NAGASUBRAMANIAM

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EDUCATION

SRM Institute of Science and Technology **Chennai**
B. Tech Computer Science and Engineering, GPA – 7.90/10.00 **July 2017 - Jun 2021**
Coursework taken: Data Structures, Algorithm Design Analysis, Object Oriented Programming, Operating Systems, Python Programming, Theory of Computation, Machine Learning, Pattern Recognition Techniques, Artificial Intelligence

SKILLS

Programming Languages and Scripting: Python, Java, C, C++, MATLAB, Bash, SQL, Selenium
Operating Systems: Windows, Linux
Technical Tools: Azure, Google Cloud, Git VCS, Pytorch, TensorFlow, Pandas, PySpark, Django, Kivy, Tkinter, Pygame

EXPERIENCE

Dun & Bradstreet Technologies & Data Services Pvt. Ltd. **Chennai**
Data Scientist - I **Aug 2021 – Present**

- Developing and improving multiprocessing web crawlers at large scale to obtain ESG relevant data for over 2.5 million companies, effectively handling 60% of the company's Internet Based Data.
- Implementing Duns Matching to analyze and connect over 50k similar companies from different web sources.
- Analyzing sustainability report using ESG relevant keywords with PySpark and Pandas for over 60k companies.
- Constructing NLP pipeline to extract relevant data by processing ESG Reports and News from over 100k companies.

PROJECTS

Image Deblurring **Oct 2021 – Nov 2021**

- Implemented an end-to-end Encoder-Decoder model for restoring blurred images with a PSNR of 86%.
- Implemented encoder with Vision Transformer backbone using Pytorch.

Bokeh Rendering **Jul 2021 – Sep 2021**

- Implemented an end-to-end Vision Transformer model for Bokeh Rendering to highlight the subject of an image.
- Established state-of-the-art results with the proposed method on EBB! Dataset with minimal computation time by denouncing the use of depth estimation.

Object Detection for Autonomous Vehicles **Jan 2021 – Mar 2021**

- Identified and localized vehicles in real time with the Faster-RCNN algorithm.
- Implemented using Python, TensorFlow, and OpenCV with Transfer Learning using TensorFlow Object Detection API

Snake Game and Gym Environment with DRL **Jun 2020 – Sep 2020**

- Developed a model free self-learning snake game and two distinct environments in the Gym Library from OpenAI with Deep Q-Networks under Reinforcement Learning.
- Implemented the Bellman Equation for Deep Q-Learning using Python, TensorFlow, Keras, Convolutional Neural Network, NumPy, and OpenCV.

Text Classification for Sentiment Analysis **Dec 2019 – Feb 2020**

- Trained a Binary Classifier model to analyze and classify positive, negative, or neutral tweets from Twitter Data.
- Developed using Python and Tweepy for Twitter API to connect and obtain the data and used TensorFlow, Keras, NumPy, and TensorBoard for training and classification.

CERTIFICATIONS

- **Google IT Automation Certificate** offered by Google, Coursera Platform, **Jun 2021**
- **Microsoft Certified: Azure Fundamentals** offered by Microsoft, **May 2021**
- **DeepLearning.AI TensorFlow Developer Certificate** offered by DeepLearning.AI, Coursera Platform, **Sep 2020**
- **Machine Learning** Course by Stanford Online, Coursera, **Sep 2020**
- **Google Cloud Platform Big Data and Machine Learning Fundamentals** offered by Google Cloud, Coursera Platform, **Jun 2018**

AWARDS

- Secured 1st place in school and won gold medals for two consecutive years in 17th and 18th "**National Science Olympiad**" with 95.75 and 98.53 percentile scores, Science Olympiad Foundation, **2013-2014**
- Secured 1st position in school amongst 300 students; was among top 1 percentile in state in "**Byju's Think and Learn Challenge**"; awarded Samsung Galaxy Tab worth 20000 INR & scholarship to Byju's Coaching Institution, **Jan 2014**