

# HARIHARAN NAGASUBRAMANIAM

(929)678-7353 | [hn2237@nyu.edu](mailto:hn2237@nyu.edu) | [github.com/Soester10](https://github.com/Soester10) | [soester10.github.io/](https://soester10.github.io/) | [linkedin.com/in/hariharan-naga/](https://linkedin.com/in/hariharan-naga/)

## EDUCATION

New York University  
MS Computer Engineering

New York, US  
Aug 2022 - May 2024

SRM Institute of Science and Technology

B. Tech Computer Science and Engineering | GPA : 7.90/10.00

Chennai, India  
July 2017 - Jun 2021

Coursework taken: Data Structures (SRM), Algorithm Design Analysis (SRM), Artificial Intelligence (SRM), Machine Learning (NYU), Computer System Architecture (NYU)

## SKILLS

**Programming Languages:** Python, Matlab, Java, C++

**Operating Systems:** Windows, MacOS, Linux

**Frameworks:** PyTorch, TensorFlow, Keras, Pandas, PySpark, Django, Flask, FastAPI, Selenium, Scrapy, Kivy, Tkinter

**Technical Tools:** Azure, Google Cloud, Git VCS, SQL

## EXPERIENCE

Dun & Bradstreet Technologies & Data Services Pvt. Ltd.

Chennai, India

Data Scientist - I [Python, SQL, PySpark, Pandas, NumPy, Selenium, Matplotlib, Seaborn]

Aug 2021 - July 2022

- Developed and improved **multiprocessing web crawlers** at large scale to obtain ESG relevant data for over 2.5 million companies, **automating** the extraction of over **60%** of the company's Internet Based Data.
- Compiled and deployed single efficient UDF in **PySpark** to improve existing Reason Code production speed by over **30%** with the inclusion of revised logic.
- Constructed **NLP pipeline** for end-to-end extraction of relevant data by processing ESG Reports and News from over **200k** companies for more than 15 markets around the world.
- Implemented SIC method in production code to shortlist over **5M** businesses involving Controversial Activities.
- Developed multiple efficient UDFs to compile Self-Assessment Questionnaires from individual companies, effectively handling over **50%** of new source for scoring conversion.

## PROJECTS

Bokeh Rendering [PyTorch, Computer Vision, ViT]

Nov 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.

Snake Game and Gym Environment with DRL [TensorFlow, Keras, CNN, NumPy, OpenCV, DRL]

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, allowing controlled exploration of agent with randomness.

Tweet Sentiment Analysis [Python, Tweepy, TensorFlow, NumPy, TFHub, TensorBoard, NLP]

Feb 2020

- Trained **BERT** model using **transfer learning** for Binary **Classification** on IMDB Dataset, with test accuracy of 90%.
- Exported the model on data extracted using **Twitter API** to analyze and classify sentimental tweets, and assessed the frequency of popular words using **TensorBoard**.

Web Data Automation [Python, Selenium, Multiprocessing, Socket Programming, CLI]

Jun 2019

- Designed an application to establish client-server connection to request credentials from clients.
- Automated** user **authentication** and extracted coding topics, and searched multiple local and online repositories to import relevant snippets as solutions.
- Implemented **Multiple Bots** to inspect dynamic elements **concurrently** for **scraping** and transferring data from one source to another.

## CERTIFICATIONS

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

## AWARDS AND EXTRA-CURRICULAR

- Secured 1<sup>st</sup> place in school and won gold medals for two consecutive years in 17<sup>th</sup> and 18<sup>th</sup> "**National Science Olympiad**" with 95.75 and 98.53 percentile scores, Science Olympiad Foundation, **2013-2014**
- Secured 1<sup>st</sup> 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**