**SIVAMARAN M A C**

**PROFILE**

An undergraduate in Artificial Intelligence seeking work experience, in real world data driven problems and software development. Interested in doing research and development in various fields of AI such as NLP, Image processing, Big Data Analytics, Machine Learning etc. I want to explore emerging technology and build on to my competence in programming.

**EDUCATION**

* **B.Tech Computer Science and Engineering(AI)**

**CGPA – 8.18 / 10 2019-2023**

Amrita Vishwa Vidyapeetham

* **Class 12** – 89.8% **2019**

Institution: Doveton Boys’ Higher Secondary School

* **Class 10** – 84.16% **2017**

Institution: ISHA HOMESCHOOL, Coimbatore

**TECHNICAL INTERESTS**

· Machine Learning and Deep Learning   
· Natural Language Processing   
· Image Processing   
· Big data analytics and timeseries analysis

**PROJECTS**

**Image Dehazing using CycleGAN**

· Duration/Period: April 2022 – May 2022   
· Objective: To dehaze the images with haze using CycleGAN, using limited number of unpaired data.

· Tools or techniques used: Python with packages like NumPy, Keras, OpenCV, skimage, pandas and matplotlib. Techniques includes Image Preprocessing, modelling generator discriminator architecture and model evaluating using PSNR (Peak Signal to Noise Ratio) and SSIM (Structural Similarity Index Measures) · Outcome: The project was successful. The Proposed model works pretty well for dehazing the image without any loss in its spatial properties while removing the haze (noise), with just 107 training samples.

**Stock market prediction using Dynamic Mode Decomposition for a basket of companies**

· Duration/Period: May 2022   
· Objective: To predict the future prices of a given basket of stocks   
· Tools or techniques used: Python with packages like numpy, pandas, matplotlib, pydmd

· Outcome: The project was successful in capturing the trend of the stock prices. MAPE values for most companies was between 0-4.This method doesn’t perform well in sudden change in market dynamics which can be due to external factors like quarterly results. The model is robust and scalable to large volumes of data.

**Creating a data structure for mechanical truss in java**

· Duration/Period: November 2019   
· Objective: To build a data structure for a mechanical truss, resolve the free body diagram and compute the resulting forces.

· Tools or techniques used: JAMA package in java for linear algebra.

· Outcome: The project was accurate in computing the resultant forces in the truss, which is very important in building a stable truss structure.

**TECHNICAL SKILLS**

Python, Julia, Java, Scala, MATLAB and JavaScript, Apache spark

**ACHIEVEMENTS & HONOURS**

Being part of the winning team in Game Jam Titans Coimbatore (2016). Subsequently, our team was invited for NASCOM conference 2016 held in Hyderabad. We also got an opportunity to present our video game in the expo

**LANGUAGES**

English, Tamil