Naimish Mani B

Student

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92B/4, No 115, Second Floor, Natu Singh Complex, Munirka,
New Delhi, 110067

+91 6379372108
naimish240@gmail.com
https://www.linkedin.com/in/naimish-balaji-a6182b180/
https://github.com/naimish240

Bio

Hi! I'm Naimish (pronounced *nei-me-sh*), a student pursuing my bachelors degree in Mechanical Engineering. I'm fluent in English, Hindi and Tamil, and have a basic understanding of French. I'm passionate about space, and am an avid learner. I am comfortable programming in Python, C and C++, and have worked with MySQL, MongoDB, ANSYS HFSS, AutoCAD, OpenSCAD, MATLAB and Simulink.

Professional Experience

Fintuple Technologies / Data and Technologies Intern

May 2020 - Oct 2020, CHENNAI, Remote

- Designed from ground up and built statistical models to categorize and rank the performance of debt-based funds, working closely with MBA graduates.
- Employed Python 3.6, Selenium, Pandas, MySQL, and Microsoft Excel for collecting, processing, storing and visualising the fund data and model predictions.

Extra-Curricular Experience

Stellaria, The Space Club / President (Feb 2021-)

Member, Sept 2018 - Current, SASTRA Deemed to be University

- Leading a team to design and test ML (Regression and Random Forest) and DL (using CNNs) algorithms for exoplanet detection on the Kepler K2 dataset using TensorFlow 2.x and ScikitLearn.
- Implemented a rudimentary 2D N-body simulation in Python 3.x, with visualizations using MatPlotLib and FFmpeg. Available on PyPi as "CrudeBHT". Presented the same during a club session using Prezi.
- Led the design and fabrication of an antenna to observe the radiations being emitted from the Sun during an annular eclipse, in an attempt to plot the Sun's magnetic field lines. Used ANSYS HFSS for design and simulation.
- Gave a presentation in front of DST-INSPIRE fellows (100-120), discussing the how and why of space travel.

Developer Student Clubs SASTRA / Web Cluster Head (Oct 2020 -)

Member, Feb 2020 - Current, SASTRA Deemed to be University

- Building a web-based platform for Google Solution Challenge '21 to promote partnerships towards attaining the 17 UN SDGs. (In Deployment phase)
- Wrote a detailed booklet on how to use Jupyter Notebooks, with detailed sections on Exploratory Data Analysis, and taught students how to use Regression analysis (Linear and Logistic) on real-world datasets.

CodeChef SASTRA / Lead

Nov 2020 - Current, SASTRA Deemed to be University

- Design workshops and sessions to teach students Competitive Programming.
- Conceptualized and created DSAstra, a weekly infographic aimed at new learners introducing them to Data Structures and Algorithms, while also working closely with graphic designers to create engaging content for the same.

Education

SASTRA Deemed to be University / B. Tech. Mechanical

Jul 2018 - Current, Thanjavur

- Current **CGPA is 7.4545/10**
- Completed coursework in Compressible Flow and Statistics, and currently undergoing coursework in Control Systems and Operations Research.

Projects

CrudeBHT / Python, MatPlotLib, FFmpeg

Built a command-line based 2D N-body simulator, to visualise the problem. Used MatPlotLib and FFmpeg to render animations of the simulation. Available as a package on PyPi.

AnimeFaces! / Python, TensorFlow, Jupyter

Set up a Jupyter Server on an Nvidia Jetson Nano (headless) to ssh into for training and visualisation. Built an AutoEncoder to act as a generator for creating anime characters by sampling from the latent space, and performed PCA on the latent vector distribution.

Megha / Python, TensorFlow Lite, Swift, Android

Built a custom CNN for ground-based cloud classification to aid weather prediction. Exported the model to TF Lite. Currently integrating it into an iOS and Android app scheduled to release on the App and Play Stores in early May 2021.

Hobbies

Photography

I maintain a page on Instagram (@the_real_naimish) to share my passion for the art. I'm passionate about Astrophotography (deep sky and landscape), have conducted stargazing workshops and have also written articles on the fundamentals of astrophotography and astrophotography on smartphones.

Music

I have been playing the Violin for the past 8 years. I predominantly trained in Carnatic music, a south Indian form of classical music. I have participated in and won competitions as well. I have also been in a band, having performed on stage multiple times over the past 3 years.