Naimish Mani B.

Mechanical Engineer | Data Scientist | Astrophile

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Bio

I am a Mechanical Engineering graduate from SASTRA Deemed University. I am a passionate programmer and quick learner. I enjoy working on interdisciplinary projects where I can learn about various domains and expand my knowledge.

Professional Experience

COSMOS AEROSPACE Co Founder

Aug 2019 – Nov 2020 | Incubatee, TBI - SASTRA

- ➔ Created, motivated and managed a team of 15 from scratch. Brought on experts from relevant fields as advisors to design a rover for autonomous search and recovery type missions.
- ➔ Designed and fabricated a prototype with wireless control using Rocker Bogie suspension system to navigate terrain.

FINTUPLE TECHNOLOGIES Data and Technology Intern

May 2020 – Oct 2020 | Remote

- ➔ Used web scraping with Selenium to scrape the required data for the model, and performed data preprocessing using Pandas.
- ➔ Designed and implemented statistical models to categorize and rank the performance of debt-based funds, working closely with MBA graduates.
- ➔ Helped design a MySQL database in the 4th normal form to leverage the dataset and models created for integration into other business applications.

Projects

SEMI SUPERVISED CLASSIFICATION OF IMAGES SHOT BY CURIOSITY ROVER

Python, TensorFlow, Scikit Learn, Numpy, Pillow

- ➔ Used a Deep Convolutional Autoencoder to generate latent space representations of the images.
- ➔ Visualized the latent vectors with t-SNE and iterated through different architectures till the network learnt useful features.
- ➔ Used a Support Vector Machine to classify the latent space representations, achieving 94 % accuracy.

GROUND BASED CLOUD CLASSIFICATION USING CNNS Tflite, Jupyter, Android, iOS

- ➔ Designed and trained a CNN with TensorFlow Lite for ground based cloud classification, and achieved an accuracy of around 70%.
- ➔ Exported the model into an Android and iOS app, deployed the same.

USING NLP TECHNIQUES TO IDENTIFY BIAS IN HUMAN SPEECH Scikit Learn, Flask, Shap, Heroku

- ➔ Built an NLP model to identify if a statement is objective or subjective, used Shapley analysis to interpret the model.
- ➔ Deployed the model with Flask on Heroku, and hosted the frontend on GitHub Pages. Set up CORS to allow resource sharing between the two platforms.

Skills

PROGRAMMING

Python • MATLAB • C++ • C
SQL • R

TOOLS

GitHub • Trello • Google CoLab
Docker • AWS • Tableau

CERTIFICATION

Google Data Analytics Professional Certificate

Education

SASTRA DEEMED TO BE UNIVERSITY

Bachelor of Technology, Mechanical Engineering

July 2018 - July 2022 | Thanjavur, India

School of Mechanical Engineering

Extra Curriculars

President, Stellaria, the Space Club of SASTRA

Head of Web Development, Google's DSC - SASTRA

Coursework

UNDERGRADUATE

- Production, Planning and Control
- Systems Modelling, Dynamics and Control
- Numerical and Statistical Methods
- Operations Research
- Industrial Robotics

Achievements

Finalist, Ad'Venture Pitch Fest • Speaker, DST-INSPIRE Camp • XPRIZE Visioneering design challenge Wiki winner