# Naimish Mani B.

## Mechanical Engineer | Data Scientist

naimish240.github.io • naimish240 • naimish-balaji • naimish240@gmail.com

## Bio

I am a Mechanical Engineering graduate from SASTRA University. I have experience with Numerical Methods, Backend Development, Machine Learning and CFD. I enjoy working on interdisciplinary projects where I can learn about various domains and expand my knowledge.

## Professional Experience

### EMSEC PVT LTD   R&D Consultant
**Aug 2023 – Present | Remote**

→ Wrote ODE and PDE solvers in SciPy to solve real-world problems numerically.
→ Designed UI Wireframes and closely monitored the development of the GUI products that interfaced with the numerical solvers.
→ Led weekly scrum meetings and wrote internal documentation for the products.

### DELOITTE USI   Analyst
**Nov 2022 – July 2023 | Mumbai**

→ Helped condense client requirements into a curated list of actionable items for the development team, saving weeks of effort.
→ Conducted in-depth analysis of existing Integrated Eligibility Systems (IES) solutions to identify and address inefficiencies.
→ Designed and developed RESTful APIs to convert monolithic IES systems into microservices using SpringBoot.

## 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 • Java

### TOOLS
GitHub • Trello • Docker
AWS • Tableau • GitFlow

### CERTIFICATION
Google Data Analytics Professional Certificate
AWS Certified Developer Associate

## 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