ABHISHEK | Indian Institute of Technology, Madras

Email: me19b069@smail.iitm.ac.in Profiles: LinkedIn, GitHub

WORK EXPERIENCE

Machine Learning Researcher Intern, Go Data Insights June 2021 - Aug 2021

- ***Project GREEN SCORE*:** Built a system with which one can calculate the greenery score of an area with **longitude, latitude**, and radius. Built algorithm for calculating the green score. Used open street map API to fetch the data for the algorithm. Calculated the greenery of an area accurately up to **1km.** Blog
- ***Project FIRE COUNT PREDICTION*:** Analyzed NASA's fire data from the **MODIS satellite**. built a fire count prediction system for a region (a longitude, latitude bounding box). Worked with a dataset of around **4 million rows** Blog
- ***Project CRYPTO PRICE PREDICTION*:** Built a stock price prediction system that considers the effect of current news sentiment also and shows its effect on prediction too. Blog .
- Created a robust **python package** with **Object Oriented Manner** for the projects which was directly inserted into the **company's backend**.

Machine Learning Developer Intern, FTS (Failure to Success) June 2021 - Jul 2021

- Analyzed daily and hourly air composition dataset consisting of **1000000 rows** and built a ML algorithm and calculated **Air Quality Index** from gaseous composition.
- Built an **LSTM** based time series prediction algorithm on **city-by-hour** data.

Full Stack Developer Intern, Jivass Technologies Apr 2021 - June 2021

- Built application for monitoring electricity with help of technologies like **React Js** (for frontend), **Django**(backend), and **PostgreSQL**.
- Application Included **Dummy** Data Creation, **Primary Dashboards** for **Customers**, **Supervisors**, and Super admin.
- Created Website till alpha phase, as per client demands

Backend Developer Intern, Chillitray Technologies Feb 2021 - Apr 2021

- Created various API with the help of PHP and MySQL and tested them using postman.
- Built token and OTP-based authentication systems with sessions.
- Created API s for sending **SMS's, Emails** for verifications of accounts. Built different types of media and other types of **API's** as per needs

SKILLS AND KNOWLEDGE BASE

Programming Languages: C++, OOP, C, Python, SQL, Java, HTML, CSS, JavaScript, PHP, Django, React

Data Science: Feature Engineering, Statistics, data visualization, Hypothesis Testing, data analysis, data mining, Regression, Machine Learning: Linear Models, Tree Based Models, optimization, Object Detection, ANN ,CNN, RNN,LSTM, GAN

Databses : MySQL, MongoDB

Python Libraries: NumPy, Pandas, Matplotlib, Scikit-Learn, open-cv, TensorFlow, Pytorch

Other: Git, Jenkins, AutoCAD, Power Point, Excel

PROJECTs

Reverse Image Search Engine

- The aim of this project to create image content base search engine for product recommendation. This was a paid project which I had done with a company.
- Implemented Auto Encoder feature vector-based image vs image comparison system which increased processing speed approximately by **4.8X.**
- Experimented with ResNets, EfficientNets, DenseNets, AutoEncoders and VGG16.

Text To Image Generator, Self, Link

- The aim is to convert a written text (like "a blue flying bird") into an image. NLP is used to extract a feature vector from the text description.
- Used GAN to create image from combination of **text embedding (1024)** and **random latent vector (100)**.

Project FND, Self, Link

- The aim of this project is to classify news articles fake or real.
- To get the accurately classified collection of news as real or fake I have built a deep learning **LSTM based** model. After using many training techniques, I got a **validation accuracy** of **0.9387%** with **training accuracy** of **0.9538%.**

RELEVANT COURSES

Introduction To Data Analytics*(MS4610),

Probability and Statistics for Data Science#,
Introduction to C Programming (CS1100),

Multivariable Calculus(ma1010),
Differential Equations(ma2020),
Series and Matrices(ma1020),
Measurements and Instrumentation(me2400),
Strength of Materials(am2200)

Introduction to Deep Learning#(CS7015),
Machine Learning Specialization, Washington University (Coursera)#.

: - #Online, * Current semeste

EDUCATION

Institute	Degree	Timeline	CGPA/%
Bachelor of technology, IIT Madras	Engineering	2019 – 2023	8/10
Maa, Sarasvati School, Kaithal	12th Standard	2017 – 2018	89.8
Government School, Kaithal	10th Standard	2015 – 2016	86.4

ACCOMPLISHMENTS

- Got 5987 rank in JEE Mains Examination out of 1.3 million students
- TensorFlow similarity contributor.
- 2nd Rank in college Deep Learning Hackthon

HACKATHONS

Deep Learning Hackathon, IIT Madras Apr 2021

- 2nd Rank
- Deepfake Image classification.
- Developed a convolution architecture with skip connections, interconnection, Depth wise separable convolutions.

Univ- AI Hackathon, IIT Madras Mar 2021

- Roc-AUC score of 0.869
- Data Augmentations, Feature engineering, classification. Used Stacking of 6 algorithms on top of a neural network.

POSITIONS OF RESPONSIBILITIES

PR Manager, National Service Scheme, IIT Madras Mar 2021 - present

- Here working as a PR manager in PR Team of NSS IIT M
- Learning to interact with people of different backgrounds and thinking's

Project Member In SBoard, Electrical club, CFI[1], IIT Madras Mar 2020 - present

- Working in project SBoard as a project member in the software module.
- Learning about R-pi, ROS, and Embedded Systems.
- Did research for haptic touch and Ultrasonic feedback

WebOps Coordinator, Mechanical Engineering Association, IIT Madras Aug 2019 - Apr 2020

- Created templates for websites with a team.
- Improved user interface to give a better user experience

* Currently Working, 1- Center For Innovation