ABHISHEK | Indian Institute of Technology, Madras

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EDUCATION

Institute	Degree	Timeline	CGPA/%
Bachelor of technology, IIT Madras	Engineering	2019 – 2023	7.91/10
Maa, Sarasvati School, Kaithal	12th Standard	2017 – 2018	89.8
Government School, Kaithal	10th Standard	2015 – 2016	86.4

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

- Worked on daily and hourly air composition dataset consisting of **1000000 rows**. Analyzed data 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

- Worked on ReactJS for frontend and Django for backend, the user database was PostgreSQL Created React-Django Web Application. Worked a codebase of around **1GB**.
- Project 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

- Worked with Postman and MYSQL database.
- Worked on building **token** and **OTP-based** authentication systems with sessions. Implemented HTTP **authorization**
- 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

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

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

PROJECTs

Reverse Image Search Engine, GoDataInsights, Currently Working

- The aim of this project to create image + text base search engine for product recommendation.
- Implemented Auto Encoder feature vector-based image vs image comparison system which increased search speed by **10X.**
- Experimented with ResNets, EfficientNets, DenseNets, AutoEncoders.

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%.**

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)**.

Deep Convolutional Generative Adversarial Network   , [Link](#)

- The aim of this project is to build model with which one can generate new images after training the model. I implemented DCGAN architecture from its original paper.
- During training model was found robust to result on addition of new images to training set.

RELEVANT COURSES

Introduction to Deep Learning#, Introduction To Data Analytics*, Probability and Statistics for Data Science, Introduction to C Programming , Multivariable Calculus ,Differential Equations, Series and Matrices, 8.Machine Learning Specialization, Washington University (Coursera)#.   : - # Online , * Current semester

ACCOMPLISHMENTS

- Got 5987 rank in JEE Mains Examination out of 1.3 million students
- TensorFlow similarity contributor.

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