

ABHISHEK|ME19B069| Indian Institute of Technology, Madras

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EDUCATION

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

WORK EXPERIENCE

Machine Learning Intern, Go Data Insights

Jun 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. But This is different from general stock price prediction systems because it also considers the effect of current news sentiment and shows its effect on prediction too. [Blog](#)
- Created a robust **python package** for the projects which was directly inserted into the **company's backend**.

Machine Learning Developer Intern, FTS (Failure to Success)

May 2021 - Jul 2021

- During the Internship, two datasets were given to analyze. Both datasets had gases and particulate matter but one had hourly frequency and the other has a daily frequency .Analyzed the day-wise data to get an algorithm that can calculate **AQI** from a gaseous composition
- Built an **LSTM** based time series prediction algorithm on **city-by-hour** data. Processed data with **1000000 rows** and 8 columns.

Full Stack Developer Intern, Jivass Technologies

Jun 2021 - Jul 2021

- Worked on ReactJS for frontend and Django for backend, the user database was PostgreSQL Created React 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

Full Stack Developer Intern, Chillitray Technologies

Mar 2021 - May 2021

- 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

PROJECTS

Text To Image Generator, Self

- 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)**.

Image Clustering with K means, Self

- The idea is to create an Image clustering model which can be used to create clusters from large dataset of images.
- If someone is limited by computing resources then this technique can be used for sampling images. so that models can be tested on samples.

Radiation Sensor, Measurements and Instrumentation Course project

- The aim of this project was to study a radiation sensor and create a detailed analysis report on it.
- Studied about types of radiation sensor. Studied Geiger Muller Counter thoroughly and talked with its manufacturers.

Project SBoard, Center for Innovation, IIT Madras

- The aim of this project is creating a touch keyboard in which one can switch from keys to mouse with a simple gesture.
- Learning R-pi and programming embedded systems
- Did research for haptic touch and Ultrasonic feedback. Now building software for the user interface and functionality. Due to COVID-19 we are not able to experiment things.

Project FND ,Self

- 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%.

SKILLS AND KNOWLEDGE BASE

Programming Languages: Working With- C++, Python, SQL, Worked With- Java, HTML, CSS, JavaScript, PHP, Django, React

Data Science Skills: Feature Engineering, Machine Learning, Deep Learning

Python Libraries: NumPy, Pandas, Matplotlib, Scikit-Learn, TensorFlow, cuDF*

Other: Git, Jenkins, AutoCAD

RELEVANT COURSEWORK

- Deep Learning[#]
 - Introduction To Data Analytics^{*}
 - Probability and Statistics for Data Science[#]
 - Introduction to C Programming
 - Multivariable Calculus
 - Differential Equations
 - Series and Matrices
 - Machine Learning Specialization, Washington University (Coursera)[#]
 - Strength of Materials
 - Measurements and Instrumentation
 - Introduction to Applied mechanics
- [#] Online
^{*} Current semester

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.

Shaastra Hackathon, IIT Madras Feb 2021

- Object detection, character recognition. completed the solution

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, CFI¹, 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

PUBLIC PROFILES

GitHub: <https://github.com/Abhis-123>