Yash Khatri

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EXPERIENCE

Research and Development Intern June 2021 – August 2021
Mele Robotics | Dubai, U.A.E

- Gathered information on the latest used engines for UAVs and researched about various parts needed for the production. Created excel sheets to differentiate the data and make the most viable choice.
- Gained insights about the various parts required to manufacture a complete UAV. Use of MATLAB to compare various engine performances. Dealt with Gantt charts to manage the entire procedure.
- Trainee under the CTO where I gained experience related to 3-D model of complex structures. Exposed to Gearbox designing using Kiss soft and SolidWorks and the necessary calculations behind them.

Intern June 2021 – July 2021
NSIC | India

- Gained experience of CAD, CAM, and CAE as to how they are applied in industrial applications.
- Worked on 2D and 3D models with basic knowledge of modelling.
- Used various tools of SolidWorks for the same to make visualization better.
- Worked on various projects and assemblies such as cycle, quadcopter and 4-cylinder engine.

College Ambassador February 2021 – April 2021
Cuvette Tech | India

- A platform to connect students and software companies.
- To execute marketing events, contests, workshops, tech talks, and quizzes.
- Involved strategic collaboration with the clubs, societies, and fests happening on campus.
- Carried out an online event for college students.

EDUCATION

National Institute of Technology, Tiruchirappalli | Mechanical Engineering Expected: May 2023
- CGPA: 8.29 / 10
- Event Manager, Task-Force - NITT
- Event Coordinator, Pragyan - NITT
- Oraganing Committee, Aaveg – NIT

PROJECTS

Bit-Predict
- A model to forecast the price of bitcoin. Pre-processed the data with Sliding Window approach to sort the data with HORIZON and WINDOW size.
- Used multiple sorts of model such as simple sequential Dense model, Conv1D model, LSTM model, N-Beats model with double residual connections and Ensemble Model with various loss functions.
- Made future predictions and checked as to how forecasting doesn't always work on open platforms. How a very small change value in the dataset can cause a huge difference in the error.

Twitter-Check
- RNN using Transfer Learning and Fine tuning to differentiate between disastrous and non-disastrous tweets.
- Created multiple experimental models using LSTM, Bidirectional RNN etc to get the best accuracy.
- Data Analysis to find out the most wrong prediction in the dataset and testing model on custom data.

Skim-Lit
- Preparing the model to skim a long text from the PubMed-RCT articles to make it visually easier to read.
- Pre-processing the data to get the lines and features in the desired format.
- Text and Character Vectorization and Embeddings.
- Used Feature Engineering to get extra data (line number / total lines) from the data for extra features.
- Made a prefetched dataset for faster processing and included batch size for the same.
- Used Functional API and combined multiple model's inputs and outputs to get the result.

Handwritten Digit (MNIST)
- Used the MNIST dataset of handwritten numbers to make a Neural Network.
- Used HTML, JavaScript, and CSS to make a small website to test the predictions of the dataset.
- Applied tensorflow.js into the html to use the TensorFlow model created in Jupyter Notebook.
- A Mathematical site where the user would enter a digit between 0-9 on the canvas, using their entry on the canvas we pre-process the data using OpenCV tools.
- After pre-processing we apply logic on the output and compare it with our TensorFlow model. If correct there is a change of display background as an indication.

SKILLS

Machine Learning | Deep Learning | TensorFlow | Python | MATLAB | SolidWorks | Ansys | Data Analysis

EXTRACURRICULAR ACTIVITIES / VOLUNTEERING

Part of the Basketball Team on NIT – Tiruchirappalli.

Captain of the Inter hostel Basketball team and placed 2nd in the Basketball competition.

Part of Dubai Heats Club in UAE.

Secured Second place in Choreonite in Aaveg'20 – the inter-hostel cultural fest organised by NIT Trichy

Volunteered as an Executive Member of 'HOPE' NGO that works for the betterment of the environment.