To,

IITD-AIA Foundation of Smart Manufacturing

Subject: **Weekly Progress Report for Week 6**

Dear Sir,

Based on my understanding and the topics covered, I have prepared the following progress report that addresses the relevant objectives of the project.

What happened last week – Week 5:

- Object detection and its associated algorithms
- Object detection with Faster R-CNN
- Explored about Lazy Predict tool
- Learned about Neural Style Transfer
- Annotated images using labelimg tool
- Implementation of YOLO Algorithm

What's happening this -week 6:

- Worked on the model to improve the model's accuracy
- Visualized the prediction of the model
- Created a custom classifier and trained it and test it on the images.
- Revised important concept of Deep Learning
- Visualized the prediction of the model
- Plotted the Accuracy and Loss Curves

Weekly Progress:

July 10:(Monday)

Created a custom classifier and trained it and test it on the images. Continued working on the project. Created a custom classifier and trained it and test it on the images.

July 11:(Tuesday)

Revised important concept of Deep Learning and Machine Learning. Continued my work on that project and trying to get more accuracy on the model than previous.

July 12:(Wednesday)

Continued the project work. Tried to handle overfitting to improve model's accuracy.

July 13:(Thursday)

Worked on the model to improve the model's accuracy. Tried to improve model's accuracy. Tried to improve accuracy of the model and saved the final model.

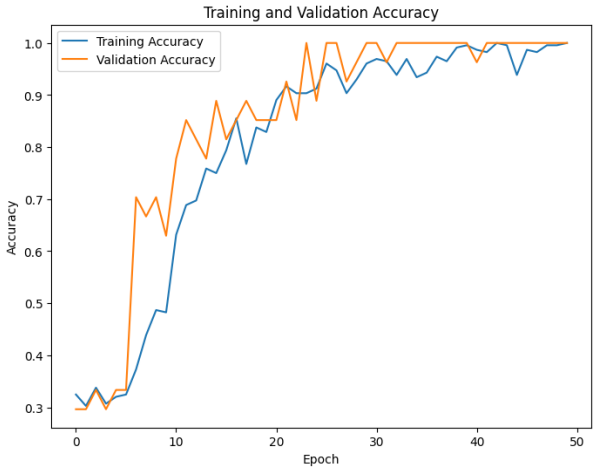
July 14:(Friday)

Visualized the prediction of the model. Worked on different visualizing techniques.

July 15:(Saturday)

Tried more visualization part in my project and continued my deployment process. Plotted the Accuracy and Loss Curves .

Visualized the prediction of the model. Worked on different visualizing techniques.



July 16:(Sunday)

Started learning about model deployment. Leaned about Deployment of Machine Learning Model With Flask .

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ID	Name
1	Numpy/Pandas
2	Basics of CNN |Convoution Operation|Padding
3	PIL Library | OpenCV
4	Image Manipulation with PIL
5	Tensorflow Data Input Pipeline|CNN
6	Model Building using CNN
7	CNN Classifiers
8	KNN for Object Detection
9	Fundamental Concepts DL
10	Implementation DL Concepts
11	Build a Model Using CNN
12	Image Manipulation with OpenCV
13	Implemented various functionalities of OpenCV
14	Exploratory Data Analysis (EDA)
15	Tensorflow framework for deep learning.
16	YOLO algorithm for object detection.
17	Semantic segmentation|U-Net architecture
18	Model Building
19	Model Training using AC piston Dataset
20	Checked the accuracy and loss of the model.
21	Completed the abstract writing
22	ResNet,AlexNet,MobileNet.
23	created model by using Resnet Pretrained mo…
24	object detection algorithms.
25	Fine-tuned the CNN model
26	Experiment with various hyperparameters and…
27	Machine learning classification methods
28	Explored about Lazy Predict tool
29	Explored about implementation of YOLO Algori…
30	Bounding box predictions, intersection over uni…
31	Annotated images
32	Learned about Neural Style Transfer.
33	Object detection with Faster R-CNN
34	Different Machine learning classification Methods
35	Created a custom classifier and trained it
36	Tried to handle overfitting
37	Saved the model
38	Visualized the result
39	Deployement With Flask
40	Revised important machine learning concepts.