To,

IITD-AIA Foundation of Smart Manufacturing

Subject: **Weekly Progress Report for Week 8**

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 7:

- Machine learning classification Methods
- Created a custom classifier and trained it
- Machine Learning Model Deployment With Flask
- Improve the model's accuracy
- Object detection and abject detection algorithms

What's happening this -week 8:

- Deployment ML model on Heroku
- Tried to improve accuracy
- Machine Learning Model Deployment
- Deployment of ML Model using FastAPI.
- Saved the final model.
- Improve the model's accuracy

Weekly Progress:

July 24:(Monday)

Learned about deployment ML model on Heroku. Due to ongoing exams, I have not been able to implement anything.

July 25:(Tuesday)

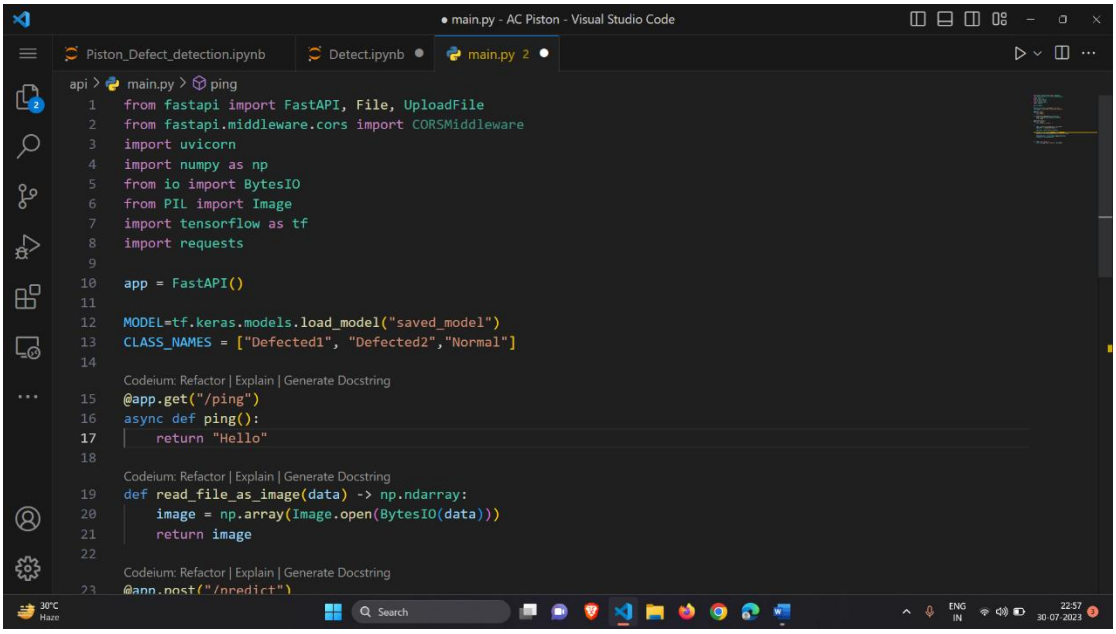
Learning more about deployment of machine learning model on Heroku using flask.

July 26:(Wednesday)

I have familiarized myself with deploying Machine Learning models using Flask.

July 27:(Thursday)

Continuing my work on deploying the ML Model using FastAPI.



July 28:(Friday)

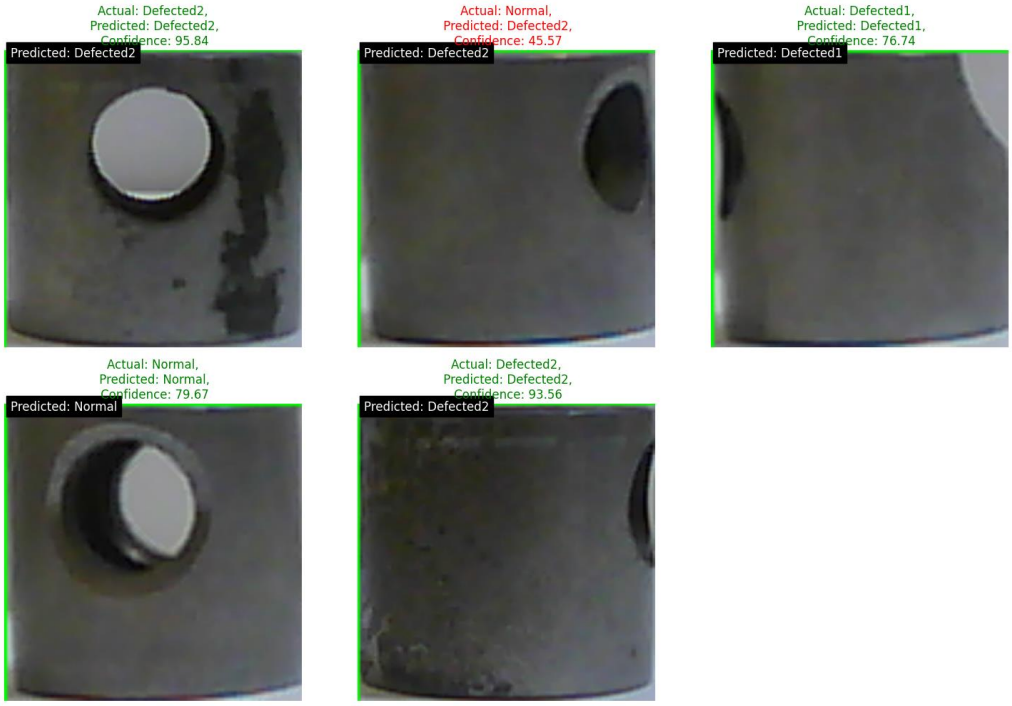
I attempted to enhance the model's accuracy and saved the final version of the improved model.

July 29:(Saturday)

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

July 30:(Sunday)

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



GANTT CHART

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	Started learning about model deployment
37	Started Deploying the model
38	Implementation of model deployement.
39	Deployement With Flask
40	Revised importnt machine learning concepts.
41	Continued project work
42	Improve the model's accuracy.
43	object detection and abject detection algorithms.
44	Created a custom classifier and trained it
45	Tried working on YOLO algorithm.
46	Learned About the different Algorithm
47	Improve the model's accuracy.
48	Created a custom classifier
49	Learned more about ML/DL concepts
50	Deployment ML model on Heroku using Flask
51	Tried to improve accuracy
52	Tried to handle overfitting
53	Continued my work on deployment of ML Model.
54	Visualize the predictions