

My understanding of INTP23-ML-9

Piston Defect Detection Using Computer Vision



12th June:

- **Learned Pandas and SciKit Library**
- **Pandas was completed**
- **Scikit still in process**

13th June:

- **Learned TensorFlow**
- **OpenCV Course completed**

14th June:

- **Tried Entering Data and evaluating it.**
- **Explored :Image acquisition and preprocessing**
- **Studied about it: Image representation and feature extraction**

- **Studied about it: Image enhancement and restoration**

15th June:

- **Working on image processing**
- **Coding on the same**

16th June:

- **Working on image processing**
- **Coding**
- **Read paper on the same topic and analysed it.**
- **Library Implemenation**

17th June:

- **Working on image processing**
- **searched for eda on data set Library Implemenation**

Week 1:

What happened this week:

- SciKit Library
- TensorFlow Understanding
- Image Processing
- Basic Understanding of Data Set.

Understanding: The goal of the research is to develop a computerised system that can automatically check for and find piston manufacturing problems. This system will use computer vision techniques to look for any indications of flaws in photographs of pistons by analysing and interpreting digital images or videos. Images of pistons will be recorded using cameras or other imaging equipment during the production process. The automated system will then process these photographs and analyse the visual data using cutting-edge algorithms and methods. The automated system for flaw detection in pistons that uses computer vision techniques will boost quality control procedures, reduce the output of defective pistons, and increase manufacturing efficiency all around.

Approach:

After using multiple images we can classify images as defect images and without it this can be done by image processing and classified by computer vision.

Weekly Progress:

