X-Ray diagnostics using Machine Learning

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Git:https://github.com/Siddharth181/X-Ray-Diagnostics-Using-machine-learning.git

ABSTRACT

- The X-ray diagnostics project aims to develop a computerized system to detect abnormalities and anomalies in chest X-ray images, such as pneumonia.
- The project will involve the collection and analysis of large datasets of chest X-ray images, the development of algorithms analysis, and the creation of the user-friendly interface to interact with the system

OBJECTIVE

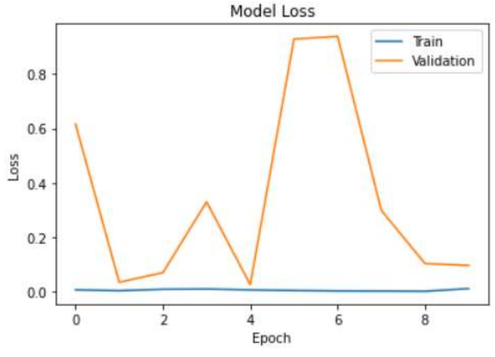
- Designing a system for detecting Pneumonia using chest X-ray images as an input.
- Main objective is to achieve better accuracy than existing model

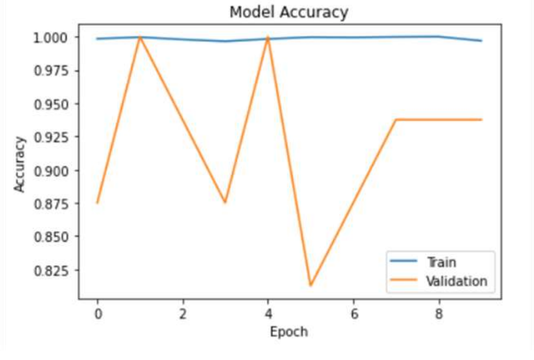
DATA

- Dataset contains about 6000 image of chest X-ray
- The dataset consists of training, testing and validation with 2 classes in each
- NORMAL and PNEUMONIA are the classes of dataset.

RESULTS

- This system give an accuracy of 99%
- This accuracy is highest than existing models





METHODOLOGY

- Data pre-processing and training has been done. In Jupiter notebook
- CNN model is used in this system, model creation has been done on python.
- User-interface i.e., the frontend is made using HTML.

CONCLUSION

- This system can be an instant Pneumonia detecting. Or else in other words we can an easy diagnosis.

REFERENCES

- [1] EMCNet: Automated COVID-19 diagnosis from X-ray images using convolutional neural network and ensemble of machine learning classifiers (2020).
- [2] Pneumonia Diagnosis Using Chest X-ray Images and Machine Learning (2020).