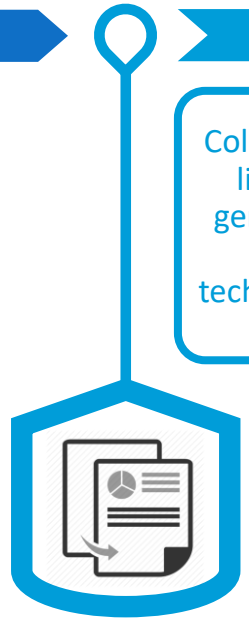
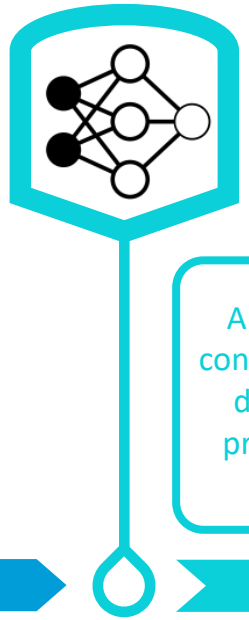
Data was collected from Hadoop cluster and was divided in training and validation set.

Data Collection



Data Augmentation

Collected dataset was limited in size. To generate more data, Augmentation techniques were used.

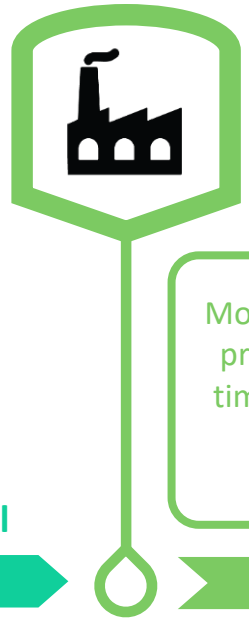


A Neural Net using convolution layers was designed for both problems, followed by training.

Design Neural Network

Refine and Improve model

Model was refined using parameter tuning and evaluated on validation set with accuracy of ~85%



Model was moved to production for real time defect analysis

Moving to Production