**ABSTRACT**

- Deep learning algorithm (CNN)
- Intensive image processing
- Works with unstructured data
- Ability to learn new data
- Automatic classification
- Decision support tool

**OBJECTIVES**

- Decision Tree
- Deep Learning
- Fast & Reliable

**PROJECT METHODOLOGY: SCRUM**

- Leatime: September 2019
- Setup: PO: Ayhan, SM: Tarık, Sprint lengths: 2W
- Backlog items:
  - Data collection, Importing Libraries
  - Building the CNN
  - Full Connection
  - Data Augmentation
  - Train & Test

**PROJECT DETAILS**

- Kordsa uses Decision Tree algorithms for defect classification
- Decision tree parameters set manually
- Deep learning to improve accuracy for higher OEE
- Python 3 open source community platform
- Google Colab as a tool
- Microsoft teams for team communication and sharing
- Deep learning algorithm with 4 main code blocks:
  1. Setups and libraries
  2. Data preparation block (image resize, sample size)
  3. CNN model (loss function (softmax), optimizer in CNNs, Convolutional Layers, Pooling Layers, and Flatten Layers, Rectified linear unit (Relu), weights and biases)
  4. Classification Layer

**CONCLUSIONS**

- Managing large data rapidly
- Training and testing the Model
- Increasing accuracy through data manipulation
- Play with the number of nodes and epochs & higher accuracy
- Reduce cost & time
- Fast & reliable deep learning model

**REFERENCES**

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