Microsoft Azure IoT

Wednesday, November 21, 2018 5:06 PM

1. How feasible and easy to port in client environment based data ?
2. How easy is it to configure the models from another process of same time order ?

Learnings

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1. Read the algorithm documents

Approach

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1. Plan for the datasets' EDA to prove that there is a value getting the other datasets
2. Explore other options for datasets' gathering
3. Edge computing - how IoT can be connected through it ?

Challenges to discuss during meeting: ---Refer Jos' mails first for any information of the below

1. Data related:
    a. Discrepancy in the two readings of feed oil and BPO readings;
    b. Where do they store the quantity of the clay consumed ?
2. Variables:
    a. Any important variables from the domain related knowledge in BPO
3. No gain from the IOT values as the same can't be possible to scrape in the first shot; but if added later then may be an issue if no significant improvement
    a. Need to discuss on potential shift of refinery from Nuri to Nusantara
4. Baseline model evaluation: The final output may be best by a simple regressor than a neural network, so we need to evaluate a number of models rather than choosing just the MISO/MIMO neural network
5. Process sweet spot: There may be only one sweet spot for the outcome variable (BPO parameters) which makes it quite a linear/direct formula and hence that may be existent already, any hints on this front from Sime Darby

Tasks before Wednesday

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1. Build the hypothesis set and publish data requirements for them individually

Hypothesis details:

A. List down limits for quality parameters and then see the distribution of data per same
B. Draw schematic of the process flow that shall be visualised
C. Use chapter 2 diagrams to form the hypothesis base
D. Use DOE as the basis for the layout of hypotheses

CV proposal

Wednesday, October 2, 2019 12:23 PM

1. Draw a sample dashboard - take inspiration from Cognitive Investigator
2. Understand business KPIs and build dashboard
3. Single camera, may be better, 33degrees tilted pole - Need to zero in on height of the camera wrt DT bed height
4. Multiple cameras may not be good idea due to complexity involved in combining - put provision in later stages
5. **Plan with the client**: Next week, few meetings. Proposal to be shared by end of Month - check on Wednesday Afternoon

To Learn -

Python : Tensorflow + Object detection method

- Neural network architecture - identify people, trucks, etc.
- Text reading: how different optical character recognition framework works, use Azure APIs
- Volume detection: Needs a view of the truck from the top, etc., colour Masking,
- Line detection, object detector, colour segmentation - semantic segmentation (too complex though)
- Deep neural networks