Progress Report

Industrial Training – Applied Statistics – 2019

Placement: CREATIVE SOFTWARE

Name of the student: H. M. M. S. JAYASOORIYA

Index No: s12916

Duration Considered: from 16th of SEP to 27th of SEP

Brief Description of work carried out

We were asked to draw a high-level diagram of the chalk influx notification system. In the chalk influx module, there are 5 models to identify whether there is a risk of having a chalk influx event in future. Other than that, there are other sub modules to upload the models to a cloud server for later usage and a notification module to notify the risks to an online service.

We drew a high-level diagram to show how the sub modules are interconnected in the chalk influx notification system and the inputs and outputs of each sub module. Each module takes some real time timeseries of data coming from sensors in the oil wells through the cloud service and after processing the data the resulting time series are returned to the cloud service.

We started to learn Kafka which is a stream-processing software platform that is used in **big data.**

Problem found and solutions found

- **The sub modules use different python environments**
  Use different **pip** files to create virtual environments using **pipenv** package.

- **Some codes were wage and the domain knowledge were not enough for the high-level understanding**
  Had an online conversation with the developers of the code to clarify the problems.

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Signature of Trainee Approved by the Industry Mentor

Learning Diary

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Week Ending 20 SEP 2019	
Day	Brief description of work carried out
Monday	• Analyzed **drawdown** model to gain a high-level understanding of that model.
Tuesday	• Continued analyzing the code.
Wednesday	• Analyzed **drift** model to gain a high-level understanding of that model.
Thursday	• Continued analyzing code.
Friday	• Analyzed **max-min-pop** model to gain a high-level understanding of that model.

Week Ending 27 SEP 2019	
Day	Brief description of work carried out
Monday	• All team members gathered to complete the high-level understanding of the module and drew a diagram to represent all the functionalities, input output time series of the chalk influx notification system. • Presented the diagram to the developers online and got the feedback.
Tuesday	• On a leave due to **Personality development seminar** organized by Statistics department.
Wednesday	• Installed **kafka** on windows operating system.
Thursday	• Started to learn model hosting for upload the model to the cloud and send **slack** notifications.
Friday	• Continued coding for host a LSTM in model hosting.

Signature of Student:

Date: 4 OCT 2019