Minutes Thursday 20/05 - Pierre Lafaye de Micheaux

Lecturer : Pierre Lafaye de Micheaux
Date : Thursday 20/05/21, 7-8pm
Attendees : Pierre Lafaye de Micheaux, James Cleaver, Md Ruhul Amin Sarker, Peter Morian, Jittinun (Nee) Trairattanasirikul

Agenda:

- PV scaling factor
- Should the lit review be focused on rooftop solar as that is our question, or should a proportion of it be focused on Energy forecasting in general
- GRU vs LSTM
- One-hot encoding
- Should we consider another accuracy apart from RMSE
- What to do to secure input data to ensure that not to manipulate energy market by changing input data e.g. temperature
- Next Steps

Minutes:

- PV scaling factor
    - To get solar pattern looks like over a day, the current data is a single rooftop in a day.
    - * MW / how many of of installation
    - Relate to forecast demand

- Should the lit review be focused on rooftop solar as that is our question, or should a proportion of it be focused on Energy forecasting in general
    - It can be both to justify the choices, current state of the art
    - The final report should cite an academic paper.

- GRU vs LSTM
    - GRU remembers pass information, GRU has less parameters than LSTM and technically should be more efficient, less overfitting
    - Discuss with Gustavo (email or meeting)
    - We have done the baseline model using regression.
    - Work on the baseline model then to work on neural network.
    - Look into time series model

- One-hot encoding for Hour and Minute
    - Every half an hour block
    - Any certain 30 hr chuck that neural network can provide; however, this may lose a lot of information like 4:30 next to 5:00

- Should we consider another accuracy apart from RMSE
    - RMSEP - RMSE prediction
    - As data scientist should look into Pros and Cons of different measures
- What protection control to prevent manipulation of the data

    - What to do to secure input data to ensure that not to manipulate energy market by changing input data e.g. temperature
- Better to aim for lower objectives and deliver than aim high and not deliver
- Solar data - we plan to use PV Solar data from Australian Photovoltaic Institute pv-map.apvi.org.au.
- The final report (30 pages) is looking for the scientific way of solving the issues, not looking for complex model or accuracy.
- Discuss about significant
- Train/Test data
- Next Steps
    - Book at meeting with Gustavo