- Developed and implement an algorithm for creating a dataset for 5th triple

- Creating 5th triple from yogo 3 dataset , where time and location is extracted from yago 3 dataset and create 4 and 5 triple for time and location respectively

- Understand the TransE and also Developed the transE model by myself with new formula and it's performing well

- Implement Mojtauba's TransH for element wise Operation for 5th triple for the above dataset and it's also performing well

- Implement Dismult for fifth triple but it doesn't perform well (Identifying the reason)

- Implement Complex_quad mojtauba's model for 5th triple however it's not performing well , but i findout the problem (the model is not learning , Complex for triple is performing well), we discussed multiple for that however it's still unsolve , and i need mojtauba's help here because i didn't have understand the 5th triple logic for that .

- Prepare shell script to run my model into the cluster and also save all the result in a excel files

- Run hyperparameter test

- Add multiple visualization by a group by operation by year , location and feature(counting head , relation and tail)
- Merge two dataset and make a comparison by scatter plot

- Developed and implemented an algorithm for finding the different kinds of relation (one to one , one to many , many to one)
- Get the train embedding of the entities
- Also generate npy files
- Generate pkl files for fifth triple
- Make time wise categories for each 100 years
- Visualize with and and entities , location and cluster

Some visualization shows below:

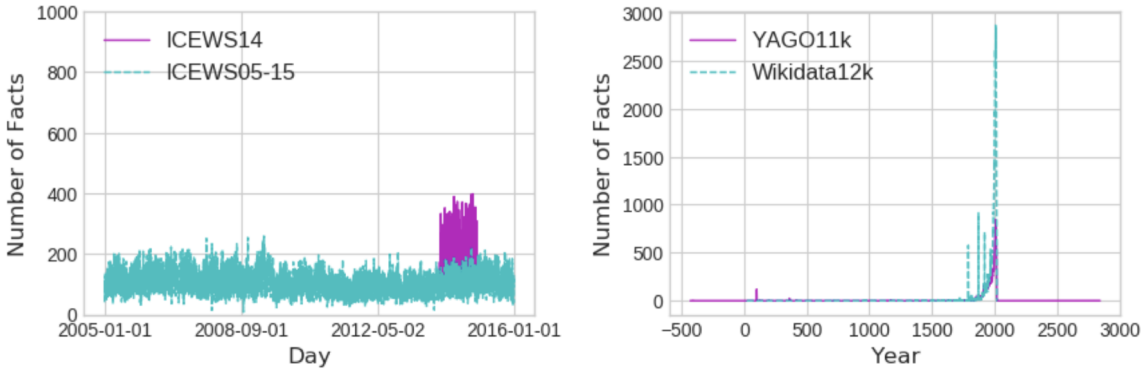

Figure 2: Time distribution of numbers of facts.

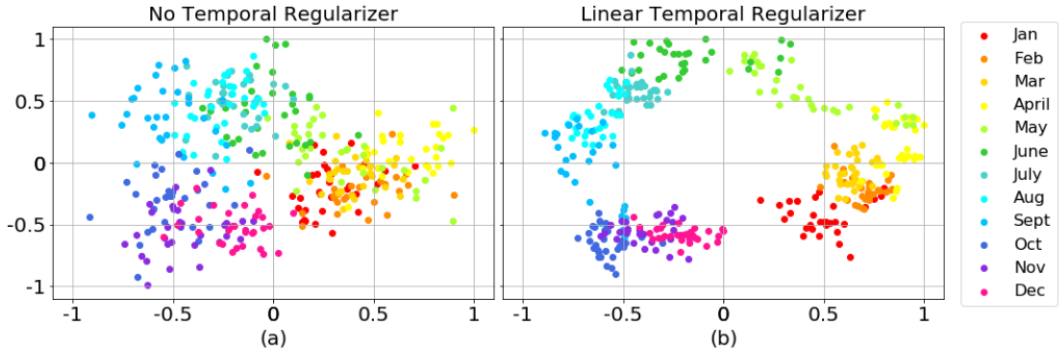

Figure 3: The figure illustrates 2-d PCA projection of the 2000 dimensional time embeddings which are obtained after training TeLM on ICEWS14 with a smoothing temporal regularizer and a linear temporal regularizer. Time points in different months are represented with different colors