Log-book on Semester Project Supervised by Ph.D. Tabatabaee Hossein

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October 11, 2021

Monday, 4 Oct 2021

- Watched two YouTube videos recommened by Ph.D. Hossein: 1. "An Introduction to Network Calculus" and 2. "RTAS 2021 Presentation (40) Tightening Network Calculus Delay Bounds by Predicting Flow Prolongat"

- Did the note on Network Calculus which be seen from Github repo. (Now the repo is private so a hyperlink cannot be inserted here)

Tuesday, 5 Oct 2021

- Re-read paper part I, II and III, i.e., Introduction, Related Work and Network Calculus Analyses

- Had a discussion with Ph.D. Hossein and solved my questions which can be seen from the conference records.

Wednesday, 6 Oct 2021

- Read paper part IV "Flow Prolongation in the NC FIFO Analysis"

- Learned the overview of GNN including GNN working flow, the usage of GNN, the difference between GNN and other NN, the classification of GNN and the mathematical expression of GNN. The note can be seen from "GNN Note". I am really sorry that I took the note in Chinese which is faster for me to comprehend.

Thursday, 7 Oct 2021

- Read paper part V "Effective FP Predictions with a GNN" and understand the overall procedure of how GNN is implemented in FP.

- Learned the general framework for GNN including Message Passing Neural Network, Non-local Neural Networks and Graph Networks which can be seen from "GNN Notebook".

Sunday, 10 Oct 2021

- Learned Cross Entropy Loss which is used as a loss function in the paper, including the mathematical function of Cross Entropy Loss, the application of Cross Entropy Loss in single classification and multi-labels classification problems.

Monday, 11 Oct 2021

- Read paper part VI "Numerical Evaluation" and part VII "Conclusion".

- Learned "FFNN", "GGNN" and "GRU" which can referred in the note folder.