

Opposition report to Lodovico Giarretta's presentation

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1 Opposition

In this seminar, Lodovico Giarretta presented three papers related to graph representation learning and graph neural networks [1–3]. Given the selection of the papers and the presentation of Lodovico during the seminar my opposition is the following:

- The three selected papers are very relevant. Each paper provides a novel graph neural network model that learns node embeddings on dynamic graphs.
- Lodovico had a clear understanding of the strong and weak points of each approach. He could perform a nice comparison between the proposed approaches and address the reasons which method achieves better performance.
- Given his expertise, Lodovico could answer all the questions that followed after his presentation without any problem.
- Despite the technical feasibility of each model, Lodovico put specific emphasis on the presentation of each paper, and he discussed the parts of each paper that was unclear.

References

1. Fathy, A., Li, K.: Temporalgat: Attention-based dynamic graph representation learning. In: *Advances in Knowledge Discovery and Data Mining*. pp. 413–423 (2020)
2. Goyal, P., Chhetri, S.R., Canedo, A.: dyngraph2vec: Capturing network dynamics using dynamic graph representation learning. *Knowledge-Based Systems* **187**, 104816 (2020)
3. Sankar, A., Wu, Y., Gou, L., Zhang, W., Yang, H.: Dysat: Deep neural representation learning on dynamic graphs via self-attention networks. In: *WSDM*. p. 519–527 (2020)

Opposition report to Vangjush Komini's presentation

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1 Opposition

In this seminar, Vangjush Komini presented three papers related to uncertainty in neural network [1–3]. Given the selection of the papers and the presentation of Vangjush during the seminar my opposition is the following:

- The three address similar problems of the same domain. Despite the fact that they are published recently and in top-tier conferences, each paper provides a novel solution on a very important problem of machine learning. Moreover, this problem is not only important from the research point of view but it has significant benefits in the industry.
- Regarding the presentation, Vangjush managed to present in a simple and intuitive way a very complicated problem. Especially describing uncertainty estimation in deep neural networks requires a strong mathematical background and being expert of the field. Vangjush was able to explain properly all the difficult parts of the papers, and expressed his point of view on each paper.
- Vangjush approached each paper in a critical way and presented all the strong and weak points. Even after his presentation, he managed to answer all the questions, which indicates that he had a clear understanding of the papers and the proposed models.

References

1. Amini, A., Schwarting, W., Soleimany, A., Rus, D.: Deep evidential regression. In: NeurIPS. pp. 14927–14937 (2020)
2. Antoran, J., Allingham, J., Hernández-Lobato, J.M.: Depth uncertainty in neural networks. In: NeurIPS. vol. 33, pp. 10620–10634 (2020)
3. Van Amersfoort, J., Smith, L., Teh, Y.W., Gal, Y.: Uncertainty estimation using a single deep deterministic neural network. In: ICML. pp. 9690–9700 (2020)