Opposition Review for Abubakrelsedik Karali's essay

By

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The three paper's chosen by the author are:

- [1] Unsupervised Representation learning by predicting image rotations
- [3] Improvements to context based self-supervised learning.
- [2] Revisiting self-supervised visual representation learning.

The topic chosen by the presenter indeed is a very important topic in the domain of computer vision (CV). While neural networks are heavily used in image classification problem, the scarcity of labels in those problems has led researchers to explore the domains of self-supervised learning, representation learning, or unsupervised learning to solve the issue. The author has chosen an array of three relevant and popular papers in the domain to stream the story in the domain.

The presentation was organized and structure nicely, starting with unsupervised representation learning and segwaying into the domains of self-supervised

learning. The composition of the presentation in terms of highlighting the interesting aspects of the papers was very good.

Considering the audience of the course, it would have been a really good exposure if the technical details of individual papers were explored a bit more. However, due to technical issues the presentation had to be cut short.

In a separate QA session, the presenter managed to address the questions put forward by the audience succesfully.

References

[1] Spyros Gidaris, Praveer Singh, and Nikos Komodakis. "Unsupervised representation learning by predicting image rotations". In: *arXiv preprint arXiv:1803.07728* (2018).

[2] Alexander Kolesnikov, Xiaohua Zhai, and Lucas Beyer. "Revisiting self-supervised visual representation learning". In: *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition*. 2019, pp. 1920–1929.

[3] T Nathan Mundhenk, Daniel Ho, and Barry Y Chen. "Improvements to context based self-supervised learning". In: *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*. 2018, pp. 9339–9348.