

CS539 - Embodied AI

Paper Review - Cognitive Mapping and Planning for Visual Navigation

- **Summary:**
 - The paper proposes a new neural architecture for the task of goal point navigation.
The points of novelty include having a unified joint architecture for mapping and planning allowing them to be learnt jointly, for efficient navigation.
 - The results seem very promising especially even when deployed on a robot and tested in the real world.

- **Strengths:**
 - The paper has been written well
 - All the experiments have been to show the effectiveness of their novel approach, all the ablation studies well justify their ideas of learning 2d map, predicting the next action better and its ability to understand and make sense of the environment well
 - The results show that given more training time and data, with addition of auxiliary losses for depth and semantic segmentation would also improve the SPL and performance more.

- **Reflections:**
 - Promising approach, is smart