Conclusion

- We pointed to the related cognitive and linguistic studies for representation of spatial meaning.
- We introduced some of the related resources and benchmarks for spatial information extraction and training models for spatial representations that can help reasoning.
- Pointed to approaches for mapping the spatial information to 2D/3D representations that can help human-like spatial reasoning.
- We reviewed several downstream tasks where they paid or did not pay attention to spatial information explicitly and we pointed to the possible research directions.
- We showed the gap between the past studies and what is used in current deep learning models for downstream tasks.
The current deep architectures ignore the cognitive linguistic studies on how space is expressed in language.

There are no appropriate benchmarks to evaluate the capabilities of the deep architectures and language models for spatial language understanding and reasoning one spatial language.

Spatial meaning representation is still a challenging topic despite all the past linguistic and cognitive studies.

Spatial language understanding needs common sense about object affordances and real-world situations.

We need more sophisticated models that take the explicit spatial semantics into account to be able to rely on them in real-world scenarios and unobserved situations.
We will add all the related info and link in here:

- https://spatial-language-tutorial.github.io

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