

Master Seminar

Deep Learning for Graphs

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Motivation

Graphs are ubiquitous

- Road Networks
- Web Graphs
- Citation Networks
- Knowledge Graphs
- Social Graphs
- Proteins / Molecules
- Scene Graphs

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visualgenome.org

https://pubchem.ncbi.nlm.nih.gov/compound/2-nitroaniline





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1. Phase	Group Presentations (mandatory attendance)	11.12.2019 18.12.2019
2. Phase	Individual Presentations (mandatory attendance)	15.01.2020 22.01.2020 29.01.2020 05.02.2020 (buffer)
3. Phase	Seminar Thesis	01.03.2020

Group Presentations (11.12. & 18.12.)

- We assign you to groups of three
- We assign each group to a research area in Deep Learning for Graphs
- Your task: 20min presentation + 5min Q&A
 - Introduce research direction (why it is relevant?...)
 - Thorough comparison of state-of-the-art approaches
- Recommended workflow
 - Collect papers
 - Get our feedback
 - Distribute papers among team members
 - Discuss papers with your team
 - Organize papers; identify common structures
 - Prepare presentation structure
 - Get our feedback

Individual Presentations (15.01. & 22.01. & 29.01.)

- You have to suggest your own topics
 - \circ We need to approve it
 - If you need help, contact us
 - Recent works (e.g. NeurIPS'19, ICLR'20 (OpenReview), ICML'19)
 - Send us the title, authors, name of the conference, and a link to the paper **in advance**
 - Deadline: 15.11.
 - If you did not find a suitable topic until deadline, we assign one to you
 - You receive your final topic at latest on 01.12.

• Your task: 10min presentation + 5min Q&A

• Present the core idea of the paper

Seminar Thesis (01.03.)

• Your task: thesis of ~20k characters

- About the same paper as your individual presentation
- Outline the central idea of the paper
- Relate it to existing work

For privacy reasons in a different document

Group	Торіс	Date
{0,1,2}	Knowledge Graph Embeddings	11.12.2019
{3,4,5}	Homophily based embeddings on non attributed graphs (e.g. Random Walk Models)	11.12.2019
{6,7,8}	Graph Neural Networks	18.12.2019
{9,10,11}	Entity Alignment / Graph Alignment	18.12.2019
{12,13,14}	Recommender Systems	18.12.2019