Motivation

Complete visualization can be found at: https://iclr.cc/virtual_2020/paper Vis.html
Motivation

Each dot represents a paper. They are arranged by a measure of similarity. If you hover over a dot, you see the related paper. If you click on a dot, you go to the related paper page. You can search for papers by author, keyword, or title. Drag a rectangle to summarize an area of the plot.

Paper’s metadata (Title, Abstract, ...)

High Level Representation

2D Visualization

Complete visualization can be found at: https://iclr.cc/virtual_2020/paper_vis.html
Idea

Find **relevant** papers to the current paper(s) of interest

Literature Survey
Idea

Find **relevant** papers to the current paper(s) of interest

**Literature Survey**

Direct References

Indirect/Relevant References
Idea

Find **relevant** papers to the current paper(s) of interest

Filter

Direct References

Indirect/Relevant References
Idea

**Literature Survey**
Find **relevant** papers to the current paper(s) of interest

**Trend Analysis**
Visually analyse how the field has evolved over time

**Unified Framework**

**Direct References**

**Indirect/Relevant References**

**Time**
Dataset

- DBLP Citation Network Dataset
  - 4,894,081 papers
  - 45,564,149 citation relationships

Dataset can be found at: https://www.aminer.org/citation
Proposed Approach

- Convert each paper into a vector representation (maybe using **Word2Vec**)

- **ID**: 124345
- **Title**: "Best paper out there"
- **Authors**: ["John Doe", "Jane Doe"]
- **Indexed Abstract**:
  ```json
  {
  "Length" : 164,
  "Inverted Index" : {
  "Our" : [0],
  "to" : [2, 7, 10, ...]
  }
  ...
  }
  ```
Proposed Approach

- **Compute similarity** between papers using this vectorized representation
Proposed Approach

- **Project** these vectorized representations into 2D space using t-SNE
Thank you