CVPR 2019

Area Chair Partitioning

Area Chair Partitioning

Problem

- We want ACs with similar institutional conflicts in the same panel
- Cluster into 8 groups by institutional conflicts
  - 120 ACs => 15 groups

Solution

- Information extraction (from CMT)
- Partitioning Algorithm
  - Preprocessing
  - Clustering

Area Chair Partitioning - Information Extraction

- Copy and pasted **metareviewers.csv**
- Exported **Users.csv**
- Original CMT information is left unmodified (since users/reviewers are still updating information)

Area Chair Partitioning - Partitioning Algorithm

- Inputs:
  - Copy and pasted **metareviewers.csv**
  - Exported **Users.csv**
- Partitioning Algorithm:
  - **Preprocessing**
    - Parse Users.txt
      - Extract user information => name, conflicts and organizations
    - Parse metareviewers.csv
      - Extract reviewer information => name, conflicts entered
      - Autofill conflicts
        - Fill institutional conflict (If conflict information was not entered)
      - Normalize conflicts
        - Remove ‘cs.’ or ‘cse.’ prefixes from institutions
        - Have canonical names for institutions
          - fb.com => facebook.com
          - uiuc.edu => illinois.edu

Area Chair Partitioning - Partitioning Algorithm

- Inputs:
  - Processed User and Reviewer information
- Partitioning Algorithm:
  - **Clustering**
    - Formulate weighted graph
      - Nodes: Reviewers
      - Edges: # of conflicts two reviewers have in common
    - Separate out into connected components (ccs)
    - For connected component larger than group size (of 15 reviewers)
      - Iterative perform community based clustering for each cc larger than group size
      - Merge communities greedily based on number of edges in common
        - If combined communities size <= group size (of 15 reviewers)
    - Final merge of graphs with singletons
      - Greedily based on largest subgraph first
        - Graph of size 10 will try to merge with graph(s) in the following order
          - 5
          - 4, 1
          - 3, 1, 1

Area Chair Partitioning - Results

- Original graph: 338 edges
- Graph (after post-processing): 280 edges
- Final subgraphs: 179 edges
- Next 8 Slides: Graphs showing group assignments
  - Green edge: 1-2 institutions in common
  - Blue edge: 3-4 institutions in common
  - Yellow edge: 5-7 institutions in common
  - Red edge: >7 institutions in common
- Results:
  - Panel Assignments
  - Institutional Assignments
  - MetaReviewers (with conflict informatIon)