

# Research Assistantship

Social Network Analysis | Apr 2023 - Jun 2023

## RESEARCH AIM & MY ROLE

Research aim:

- To explore if **peer helping** has any influence on academic performance

My role:

- Perform **social network analysis** to explore correlations with their final performance

## METHODOLOGY

### DATA PROCESSING

- Identifying receiver from Q3
- Create a **class-level** adjacency list
- Create a **cohort-level** adj. list

### CENTRALITY MEASURES

- # of peer-help given/received
- # of peers helped/received helped from student

### REACHABILITY MEASURES

- Class-level reachability over time

### COMMUNITY DETECTION

- Used Louvain Clusters to establish cliques

### CONTROL VARIABLES

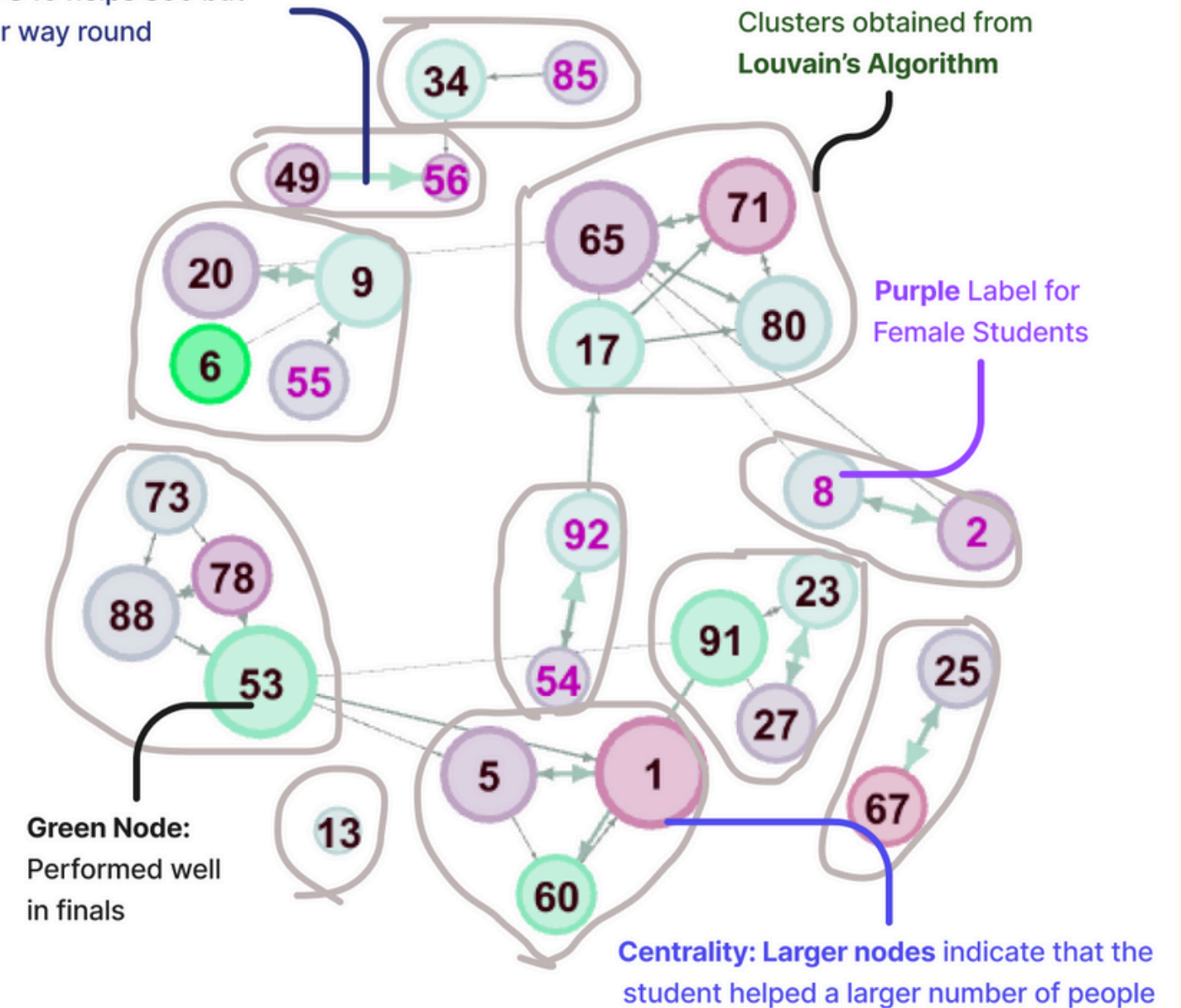
- Control Variables for **gender**
- Control variables for **outsider** status

### Weekly Class survey

- Q2: Did you help a friend? (Answer: Yes/No)  
Q3: If you did, which student did you help and what did you help with? (Long text)

**Reciprocity:** S49 helps S56 but not the other way round

**Community Detection:** Clusters obtained from Louvain's Algorithm



Directed Graph of one class after 11 weeks of peer helping

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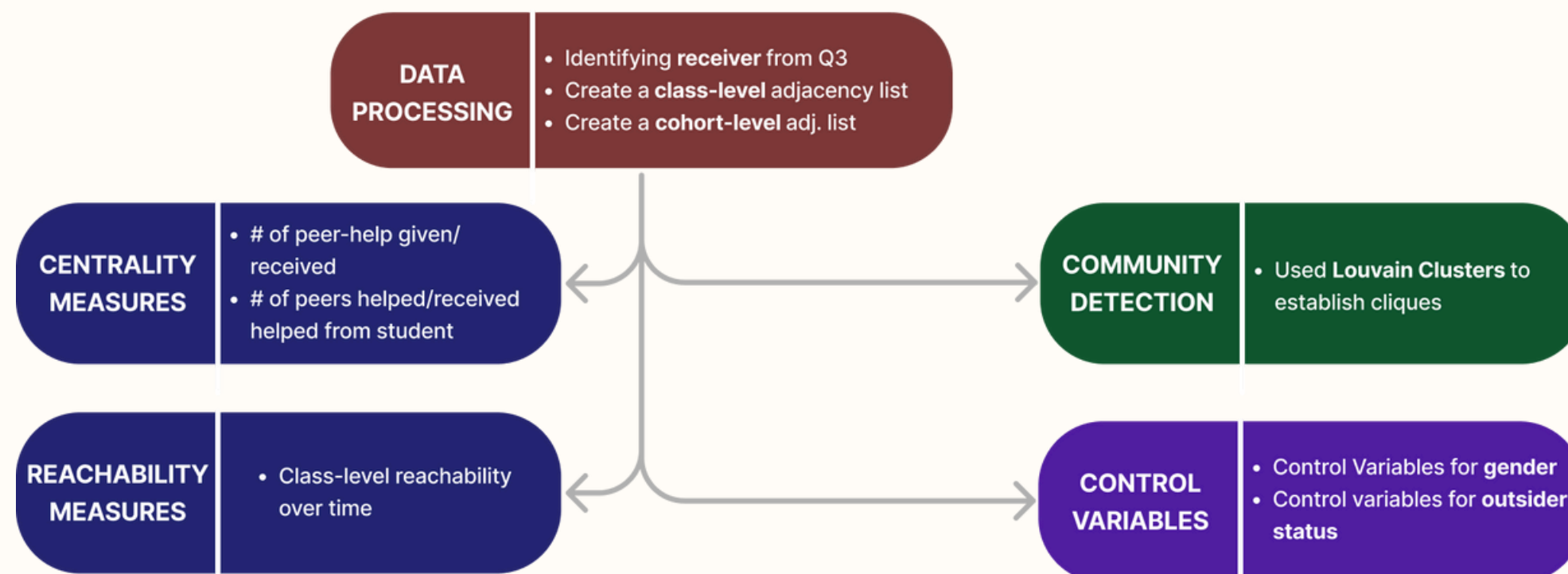
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## WHAT I GAINED

- Technical Skills: **NetworkX**, and Gephi (Visualisation Tool), **Centrality, Community Detection Methods**
- Learn how to **analyse with a tight deadline**
- Learn how to collaborate in a team of different expertise

## AWARDS

- Co-authored** the publication at IEEE TALE 2023
- Achieved **Best Conference Paper Award!**