ECE 3600 Final Project

<u>Effect of Human Networking:</u>
Testing ChatGPT vs Manual Assertiveness

Presentation by Anirudh Gattu, Aryaan Kulkarni, Mohit Pinninti, Raj Patel, Joseph Cannaday, Milan Mistry
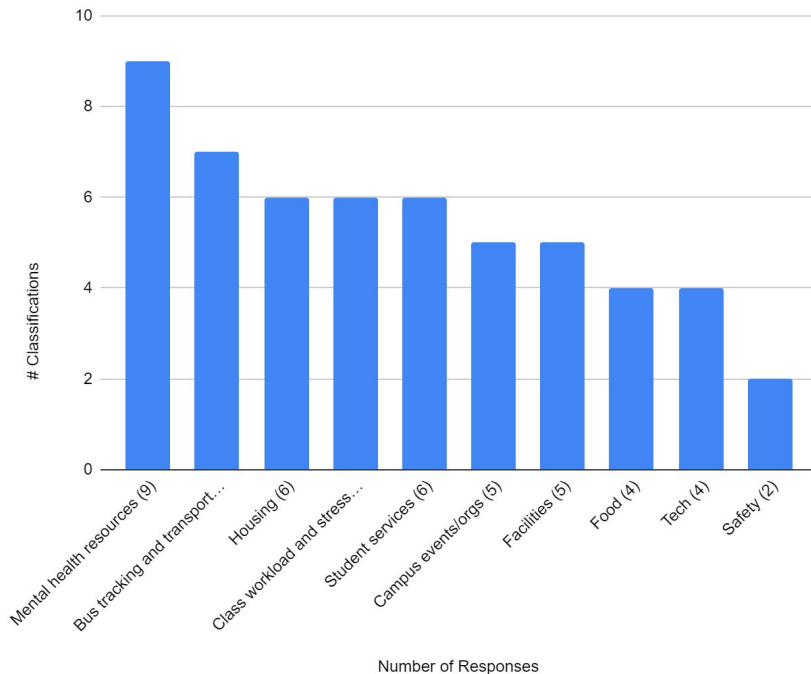
Process

- Collect Data → Three Experiments

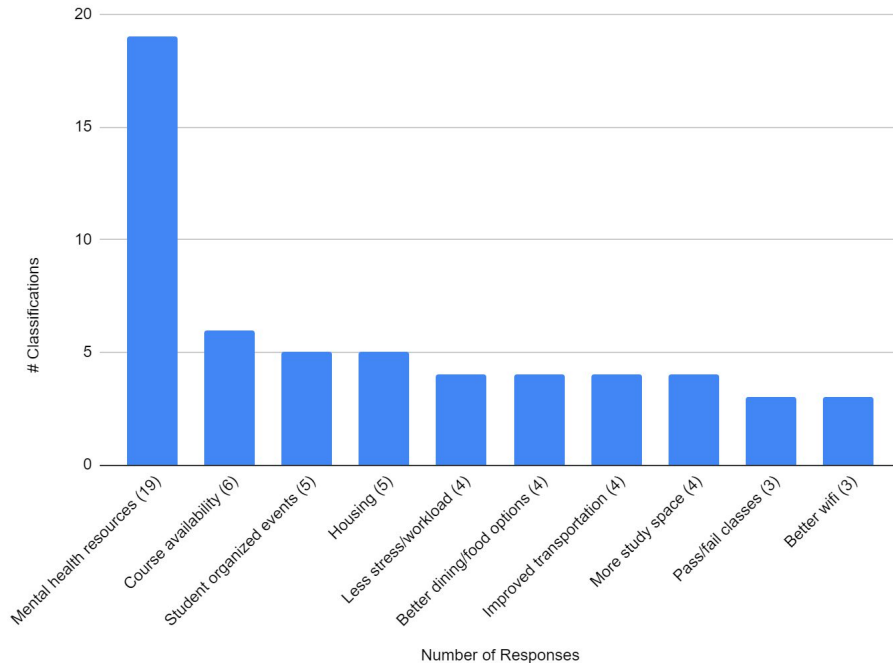- Cleaning & Classification

- Analysis

Chat GPT: Before vs After Networking

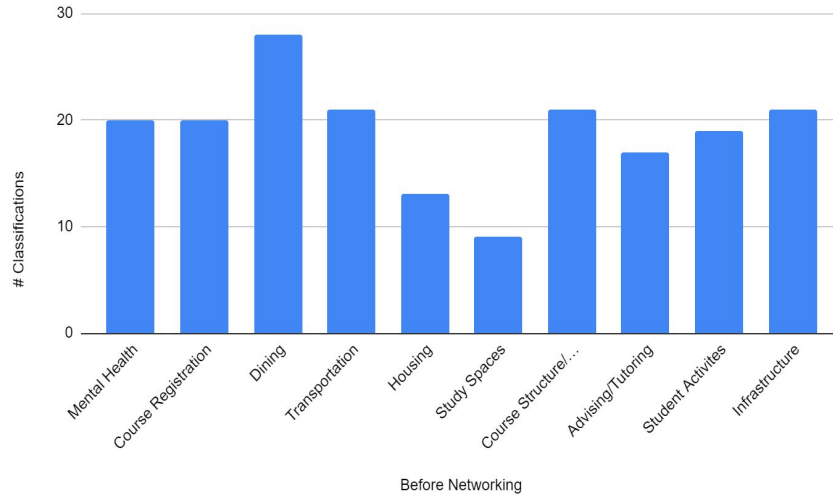ChatGPT's Classifications Before Student Networking

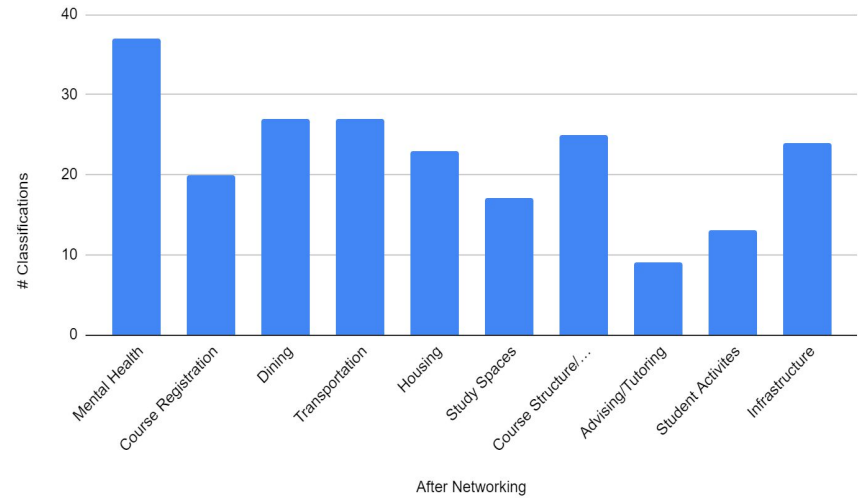ChatGPT's Classifications After Student Networking

Manual: Before vs After Networking

Manual Classifications Before Student Networking

Manual Classifications After Student Networking

Chat GPT vs Manual Results

Analysis of Results

- # Classifications in Chat GPT < Manual
  - Y-Axis values notably less in Manual
  - Unable to understand GaTech specific acronym, Semantic Correlation

- Mental Health amongst highest in Manual
  - Large jump after networking, initially dining was high
  - Mental Health was consistently high in Chat GPT

- Both show noticeable drops in certain fields w/ Networking
  - Dining, Course Availability, Advising / Tutoring

Reflection

- Manual classification produced more detailed categories with higher numbers of data points classified than ChatGPT.

- ChatGPT's ability to classify text accurately is dependent on the quality and quantity of the data it is trained on.

- ChatGPT categorizes data by searching for keywords and then assigning the data to a category based on their presence. This approach is quick and easy, but it can be inaccurate. This is because ChatGPT may not consider all of the minute details in the data, but only the keywords that are found.

- The probability of inaccuracies occurring in ChatGPT's analysis increases as the size of the dataset fed into it grows.

- Manual classification is still highly accurate method for big data analysis, but can be time-consuming and resource-intensive.

Relevant Other Studies

Quantifying the effects of social influence [1]

- Humans respond to indirect social influence in decision-making by adjusting their guesses based on the judgement of others.
- The adjustment of individual guesses depends on what they have observed or noticed (pattern of some sort)
- Collective decision-making under social influence has a unified results

Crowd control: Reducing individual estimation bias by sharing biased social information [2]

- Cognitive biases are common in humans can be reinforced by social interactions
- Underestimating large quantities is a common bias in decision-making
- Restructuring social interactions by trusting larger estimates can reduce the underestimation bias and improve judgment accuracy.

[1] Mavrodiev P, Tessone CJ, Schweitzer F. Quantifying the effects of social influence. Sci Rep. 2013;3:1360. doi: 10.1038/srep01360. PMID: 23449043; PMCID: PMC3584930.

[2] Hertz U, Romand-Monnier M, Kyriakopoulou K, Bahrami B. Social influence protects collective decision making from equality bias. J Exp Psychol Hum Percept Perform. 2016 Feb;42(2):164-72. doi: 10.1037/xhp0000145. Epub 2015 Oct 5. PMID: 26436525.

Mental Health - CARE GaTech

- Mental health had the highest number of responses.
- They take the initiative to provide programs and services for mental health to current Georgia Tech students.
- **Services:** mental health workshops, and consultation for faculty and staff, family and friends of Tech students.
- Can be reached out at **(404) 894-3498**.
- **Leadership**: Dr. Carla Bradley.
- **Website**: mentalhealth.gatech.edu

Carla Bradley, PhD
Director