



Help Sessions in Computer Science

By Shukang Wang (Kevin)

Supervised by Dr. Ramon Lawrence

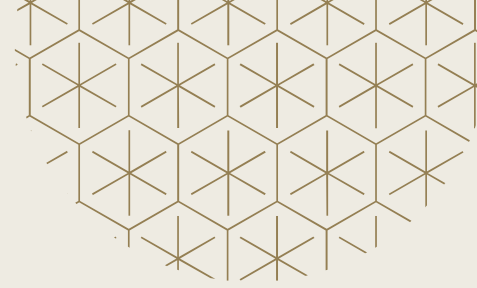


Table of contents

01

The problem

Office hours are facing challenges

03

Results

Did it help?

02

Solution

HelpMe and incentives

04

Conclusion

A success? Or not 😞



Office hours and labs face challenges

- They are not convenient
- Students do work closer to deadline, and not before office hours and labs
- They take too much time (waiting in line)
- Questions might not be answered
- Problematic virtualization of office hours

Online

📣 For student questions.

🔄 Queue up to date

Edit Queue Details

Add Students

Help Next

Check Out

Staff

 **Shukang Wang** ● Available
Looking for my next student...

Away
Toggle to indicate away


Clear Queue

Delete Queue




Group Students (0) ▾

Add Students +

Waiting In Line (2) ▾

#1  Test Student
⌘ 0 min | ? Default grading type

#2  Test Student
⌘ 0 min | ? Default grading type

Test Student 10000000   

Default grading type

Current Office Hours

You are Professor for this course

Clock ID:

April 19, 2023

08:00

09:00

10:00

11:00

12:00

13:00

Online

0/0 users

1 staff checked in



Name

Check Out

Get Help

Visit Times on Webex



Monday	
8:00	
9:00	
10:00	
11:00	
12:00	
13:00	
14:00	
15:00	
16:00	
17:00	
18:00	
19:00	
20:00	
21:00	
22:00	
23:00	
24:00	

Update Calendar

Online

For students

Queue up to view

Staff



Teacher Profile
+ available
waiting for my team member

You are 2nd in queue



Question
Determine good before

TYPE
General question

ANSWERS



Queue

0	Question	0 min
1	I have a question regarding before later	3 min
2	Determine good before	8 min



Unmute notifications



Implementation

- [Next.js](#) lets us do server-side and client-side React rendering. It also gives us developer ergonomics like hot reload in dev.
- [nestjs](#) runs our backend http api. It gives us controllers and services and helps neaten the code
- [Typescript](#) lets us write maintainable, scalable Javascript
- [Postgresql](#) is a very reliable and popular SQL database that is great for 99% of applications
- [TypeORM](#) lets us query Postgres easily and with Typescript validating our schema.
- [Docker](#) sets up a consistent Postgres + Redis environment on all developer's machines

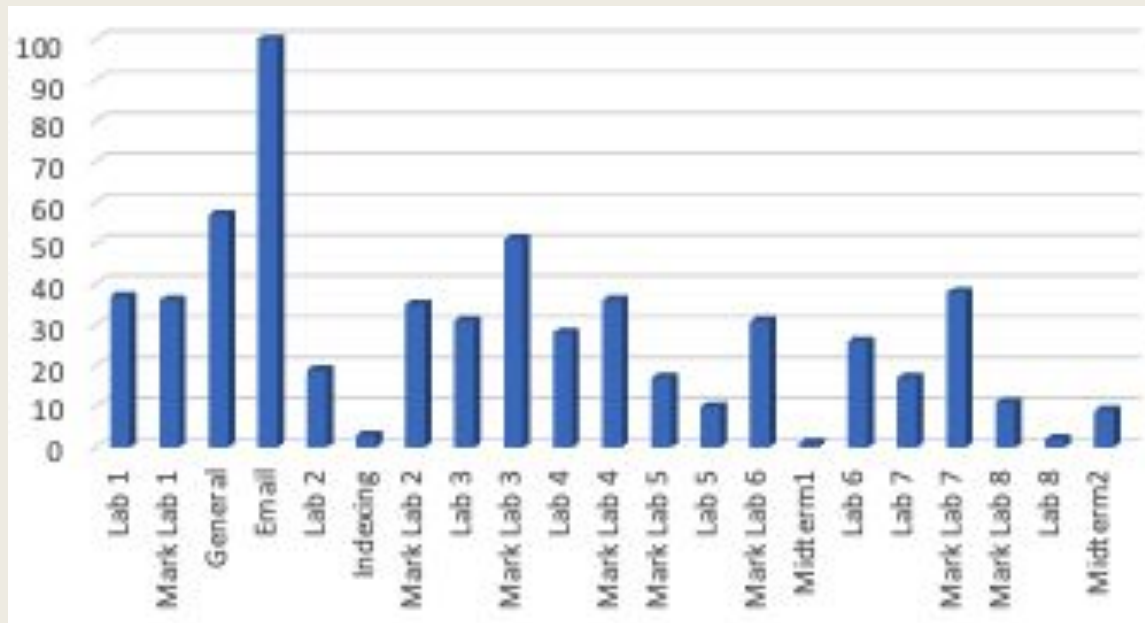
Methodology

- HelpMe captured data in COSC404
- End of semester survey data
- Interviews with Instructor and TAs

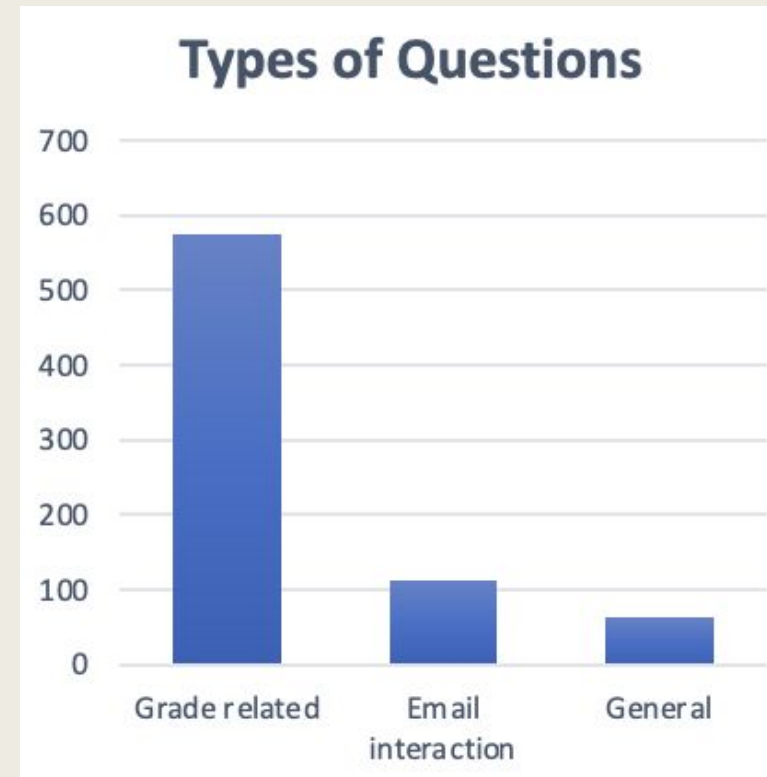
Results

- Student questions types
- HelpMe system satisfaction
- Student behavior

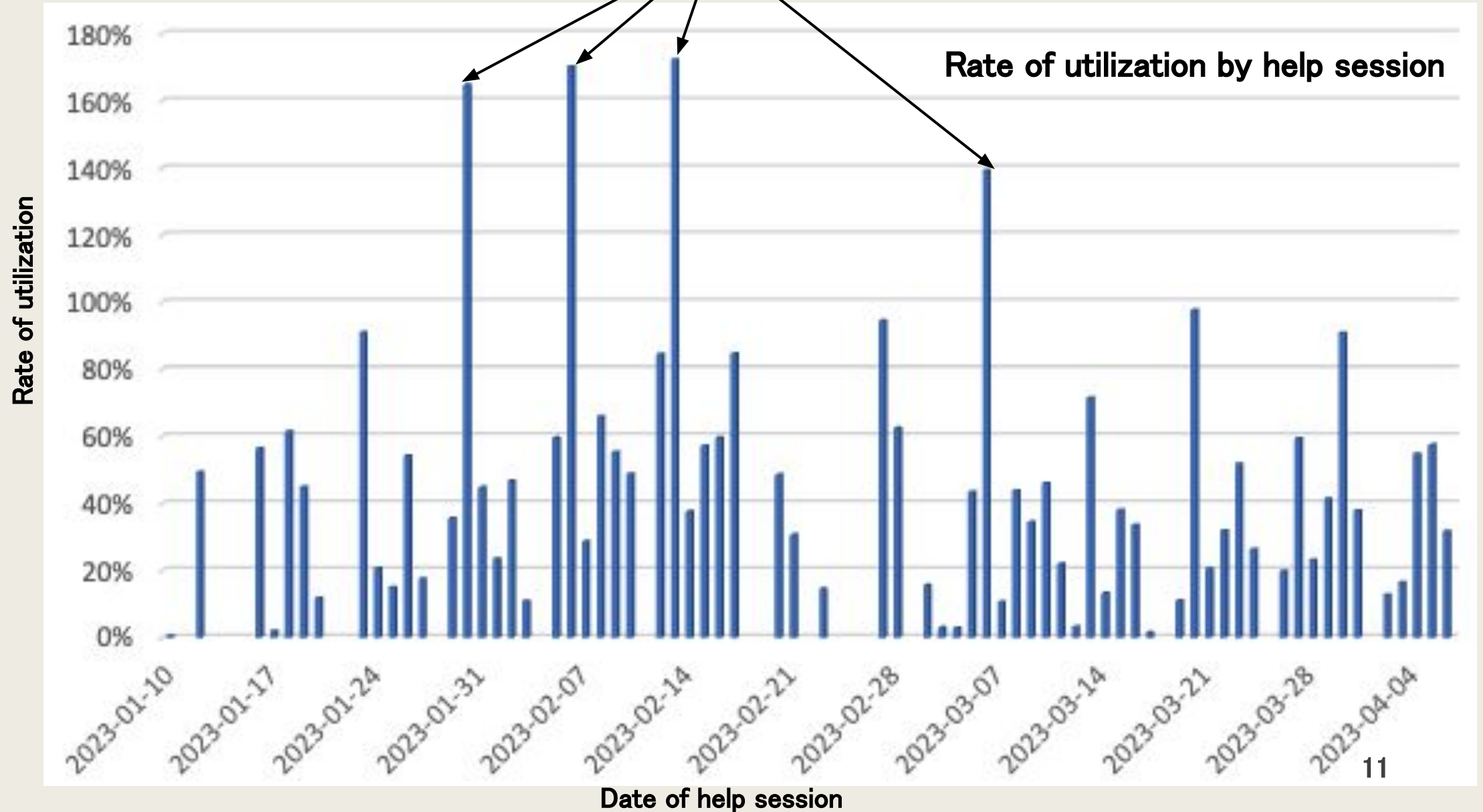
Question Distribution



Question Type distribution



Monday(10% bonus day)



	From previous courses	After using HelpMe
Office hours	24%	10%
Email	42%	16%
Did not seek help	22%	10%
After class	12%	0%
Virtual Office Hours (with HelpMe)	N/A	63%

Preferred help seeking method

How did the HelpMe system help

I loved it, utterly loved it.

For students:

- Visibility
- Convenience
- Fairness

This is the first time I am using such a tool, which has greatly helped my performance in the course.

It's extremely helpful in organizing help sessions... no major negatives

For staff:

- Managing office hours
- Feedback for courses
- Question tracking
- Monitor TA performance

Question	Score
Receiving bonus marks for early assignment completion motivated me to finish assignments earlier.	4.78
I attended office hours more frequently due to the bonus marks.	4.43

What incentivization did

Conclusion

HelpMe improves
office hour
experience.

Assignment
incentivization
shows potential in
promoting student
learning.

Future work

- More research regarding help seeking
- Async questions

CS304 Today Schedule Queue

Asynchronous question center

Post your Question

Your Questions (1)

- #1 TS Test Student
Lab 1 setting up
973hr 47min

Questions visible to all (1)

- #1 AW angela wang
question on lab1 about lol

Posted by a curious Student

Question: Lab 1 setting up

lab1

The database connection is not working, the picture includes my method of connection

```
public ResultSet query() throws SQLException {
    System.out.println("Executing query 41.");
    try {
        Statement stmt = con.createStatement();
        return stmt.executeQuery("
            SELECT name, salary from person
            order by salary desc
            ");
    } catch (SQLException e) {
        System.out.println(e);
        this.close();
        return null;
    }
}
```


Special thank you

I would thank my great mentor, Dr. Lawrence, who has been instrumental in promoting student happiness.