

# Designing the Dining Experience

H0791400

Final Year Project

by

Pee Choon Hian

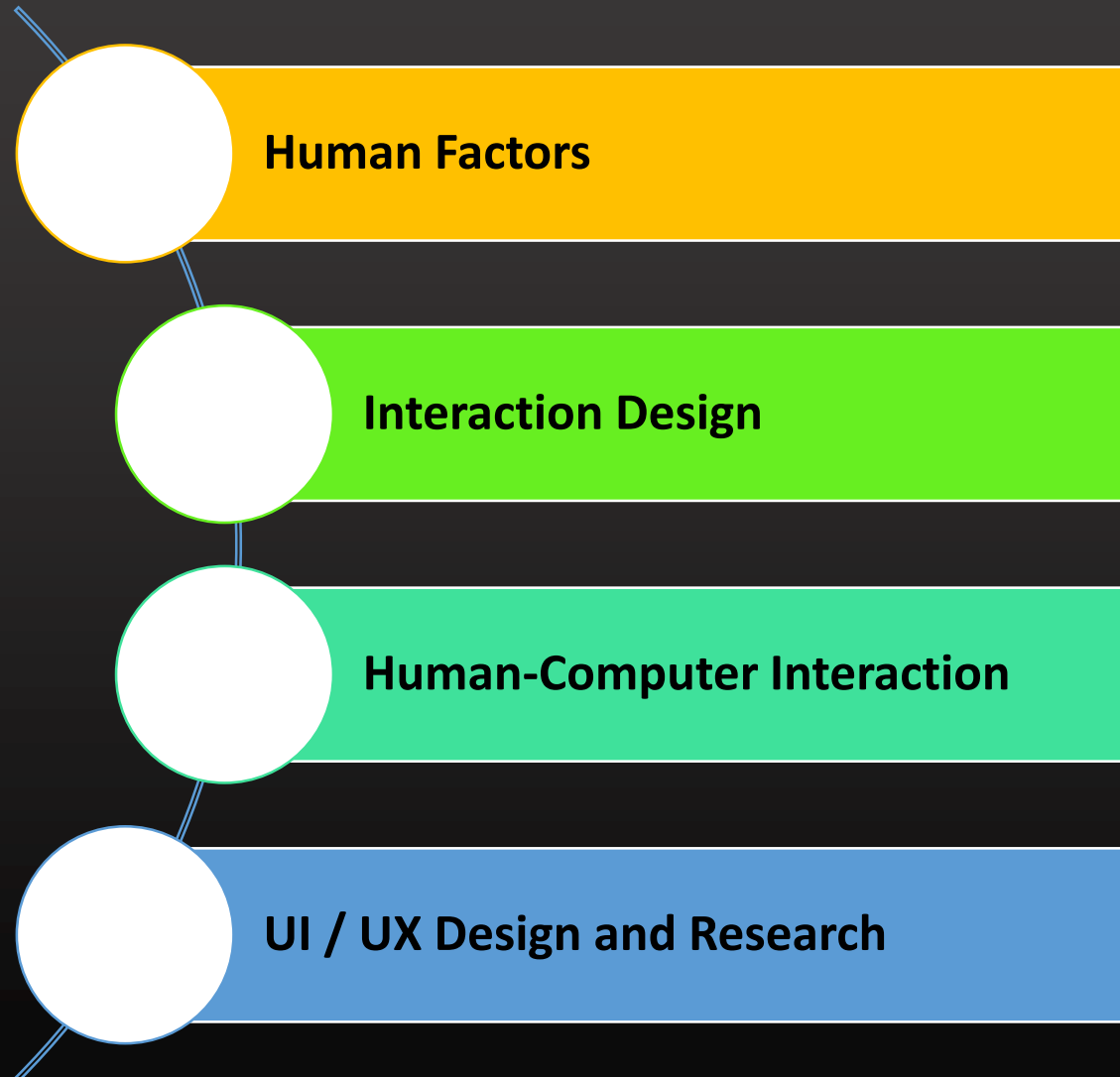
# Acknowledgements

- Dr Min-Yen Kan (Supervisor)
- Mr Vivek R (Supervisor from CrayonData)
- Web Information Retrieval /  
Natural Language Processing Group  
(WING)
  - <https://wing.comp.nus.edu.sg>



# 1. Introduction and Motivations

- Focus on designing a user experience
- Scenarios related to users discovering places to dine at



# 1. Introduction and Motivations

- Collaboration with CrayonData
  - Worldwide dataset comprising of 1.5 million restaurants around the world
  - About 100+ data-points about each restaurant
  - Including 10M+ user reviews
- Designing a user experience
  - Help users discover restaurants
  - Navigation techniques
  - Information Abstraction



# 1. Introduction and Motivations

- Approach taken
  - UI / UX design research through
    - Literature Reviews
    - User Studies
    - Interactive Prototype Development
- Project Deliverables
  - An interactive prototype of the final design
  - Public Outreach : Designing the Dining Experience Website

# Overview

1. Introduction and Motivations
2. **Scenarios and Personae**
3. Demonstration of Final Prototype Design
4. Design Process and Decisions Made
5. Evaluation of Final Design
6. Outreach Progress and Statistics
7. Summary of Contributions
8. Questions and Answers

# 3. Scenarios and Personae

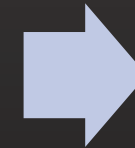
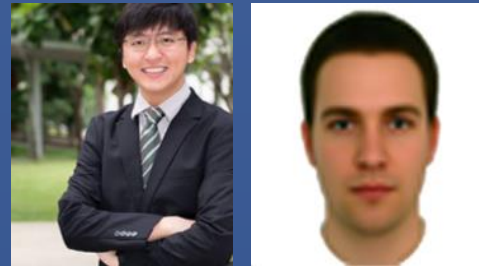
## User Groups

- University Student
- Working Adult



## Personae

- Albert Brenson
- Jack Walker



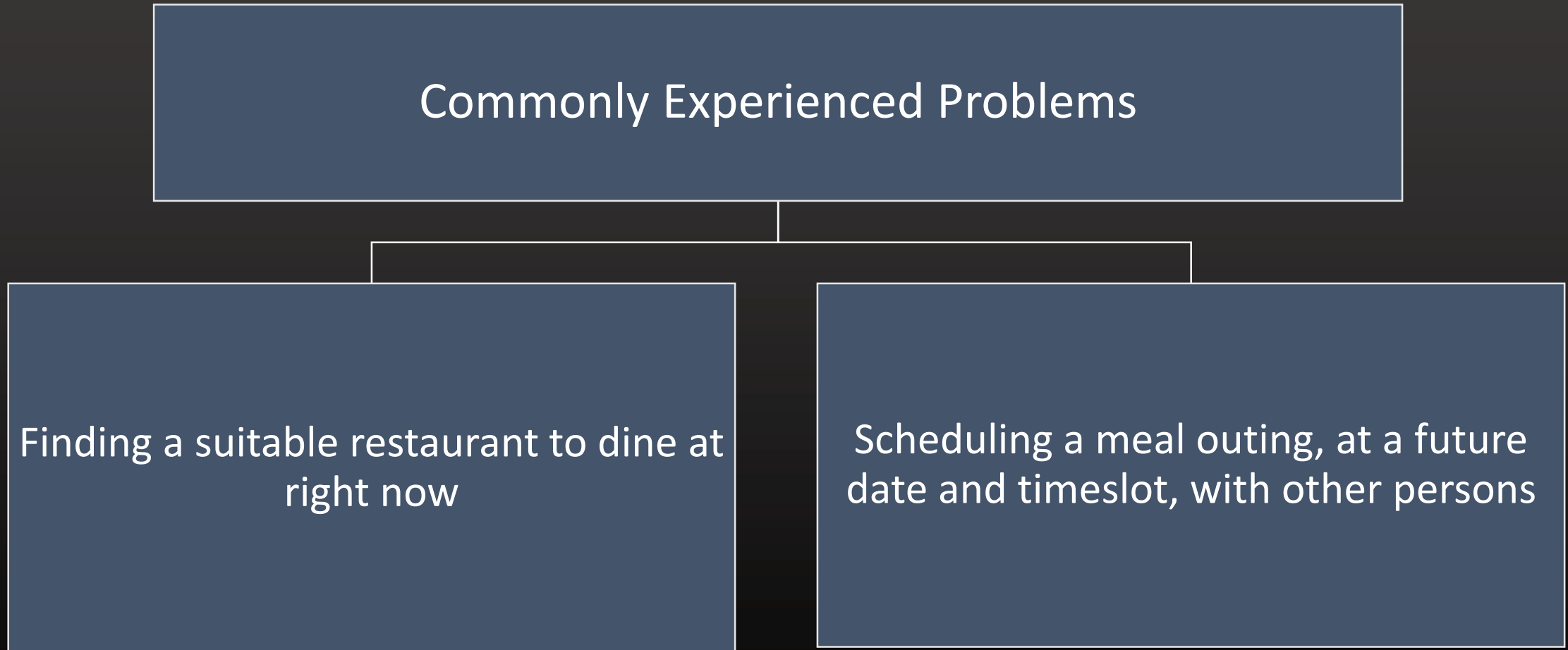
## Scenarios

- Instantaneous Scenario
- Scheduled Scenario

### Assumptions

- Already have accounts with the dining app
- Already provided demographic details and dining preferences to the dining app
- Already linked their online calendars (which are diligently populated) to the dining app

## 2. Scenarios and Personae

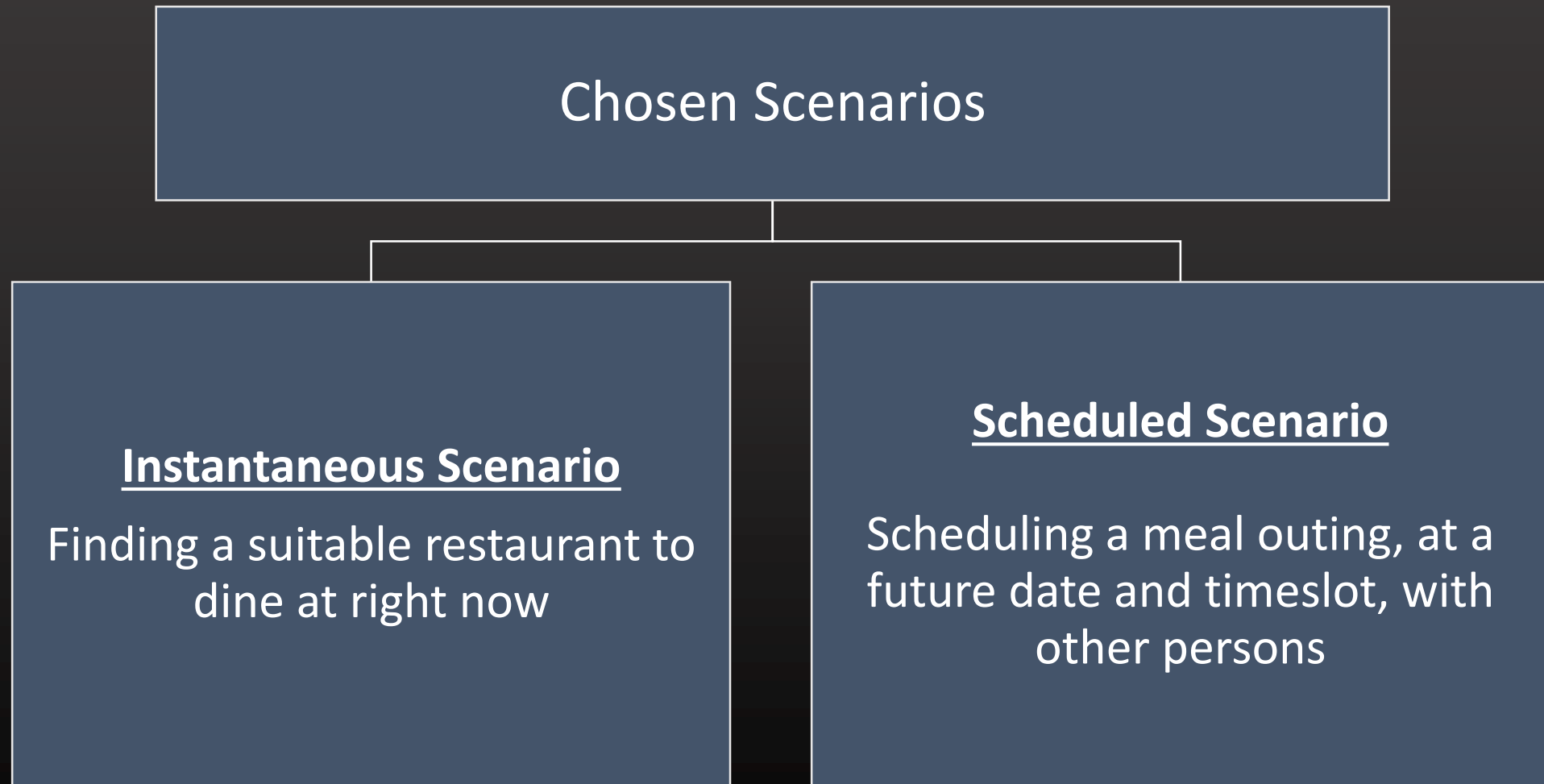


How were these two problems chosen?

- A user study was conducted to decide on the commonly experienced problems.



## 2. Scenarios and Personae

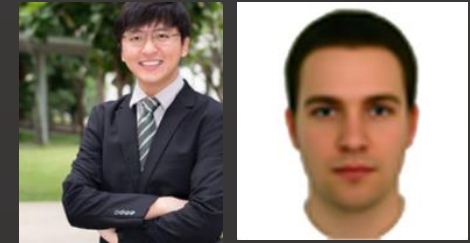


# 3. Scenarios and Personae



- Instantaneous Scenario
  - Albert Brenson has just finished an interview in the downtown area, and is looking for a place to have lunch. He is currently alone.
  - As he does not frequent this area, he is not too familiar with the restaurants nearby, and would like to try something new.

# 3. Scenarios and Personae



- Scheduled Scenario
  - Albert Brenson and Jack Walker are currently together, at networking session for Company A.
  - As they share a common area of interest, they would like to meet again over coffee some time in the future.
  - They would need to decide on a scheduled mutually free date and timeslot, at choose a particular café to meet at.

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# Demonstration of Final Design

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# 5. Design Decisions

Literature  
Review

- *Five-stars rating system*
- Gregorian-style grid-view calendar interface
- A user's existing calendar events must be shown
- Top five most important restaurant attributes, which should be displayed
- List-based interface to display restaurants (rather than map-based)
- Incorporate the “horizontal swiping” mechanism where contextually relevant
- A dark-on-light color scheme featuring orange accents



### Recommended places to visit now

...because you like coffee...

## Starbucks Coffee (Rochester Park)



6 minute walk from here  
Chill and Relaxing Ambience  
Prices: Average \$6 to \$10 per cup



Bookmark

More Information

Add to Plan

...because it's dinner time and you're usually nearby...

## Canton Paradise (The Star Vista)



Start a New Plan



Based on 136 user ratings

Read User Reviews

Open 24 hours - Likely less crowded at 3pm today

Crowd Times & Opening Hrs

Coffee Quality Rating



Rate

Average Prices  
\$6 to \$10 per cup of coffee.

View Menu and Prices

Bookmark



Select Cafe





# 5. Design Decisions

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Review

User  
Study

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### DECEMBER 2016

SUN	MON	TUE	WED	THU	FRI	SAT
27	28	29	30	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

9am	Free Timeslot
10am	CS4249 Lecture
11am	Project Meeting
12pm	Busy
1pm	Free Timeslot
2pm	Free Timeslot

NEXT >



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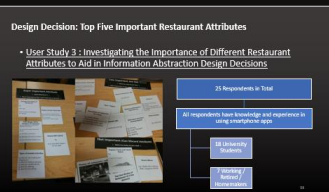
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1pm	Free Timeslot
2pm	Free Timeslot
3pm	Free Timeslot
4pm	Meeting with Amanda
5pm	Free Timeslot

NEXT >

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# Starbucks Coffee



Based on 136 user ratings

[Read User Reviews](#)

Open 24 hours - Likely less crowded at 3pm today

[Crowd Times & Opening Hrs](#)

Coffee Quality Rating



[Rate](#)

Average Prices \$6 to \$10 per cup of coffee.

[View Menu and Prices](#)

[Bookmark](#)



[Select Cafe](#)

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Ambience



Noisy and casual (Hawker Centre / Food Court) Lively and upbeat (Live Band, Loud Music) Chill and relaxing (Great for study / chat) Classy Hotel (Super classy ambience)

Raffles City - Next to City Link Mall  
Nearest MRT Stn - City Hall

[View MRT Map](#)

EW13 NS25

Distance from Me - Less than 1km  
Walk - 4 minutes from here

[Get Directions](#)

[Bookmark](#)



[Select Cafe](#)

# Starbucks Coffee

\$6 to \$10 per cup of coffee.

[and Prices](#)

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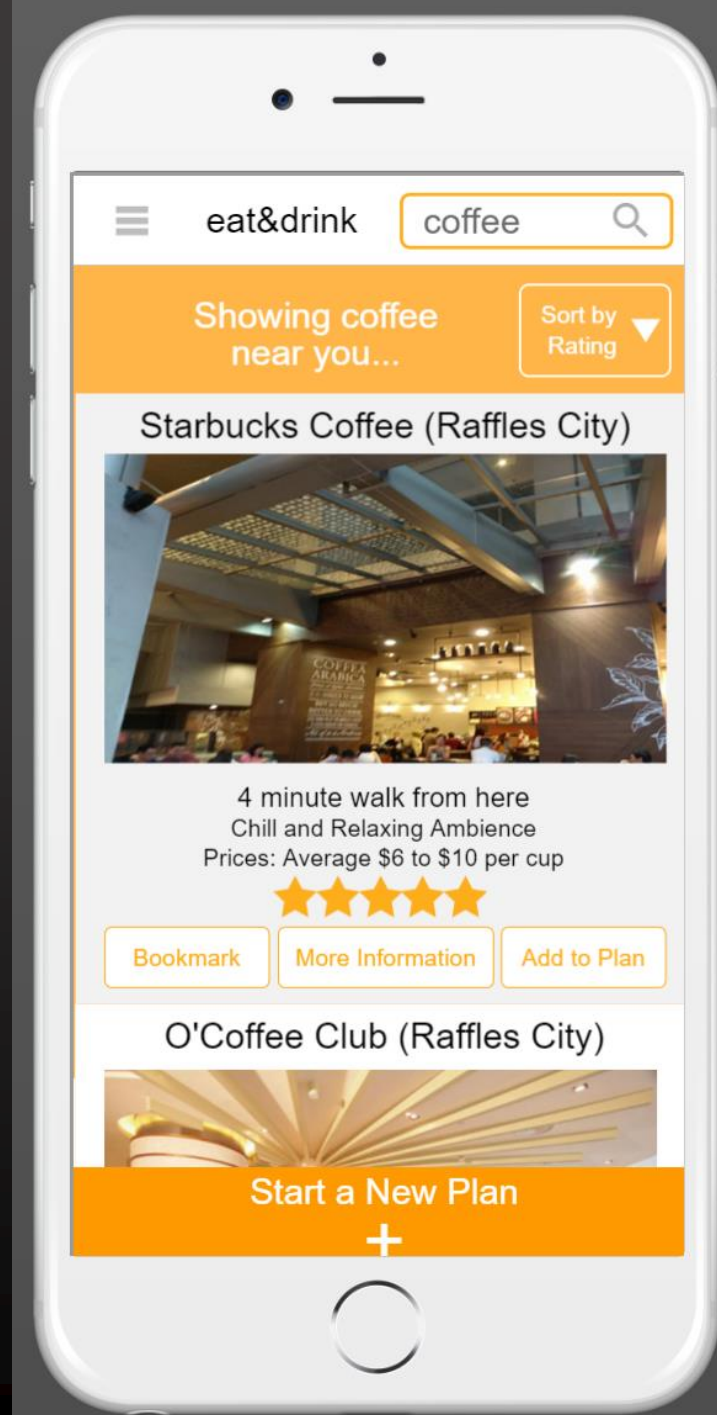
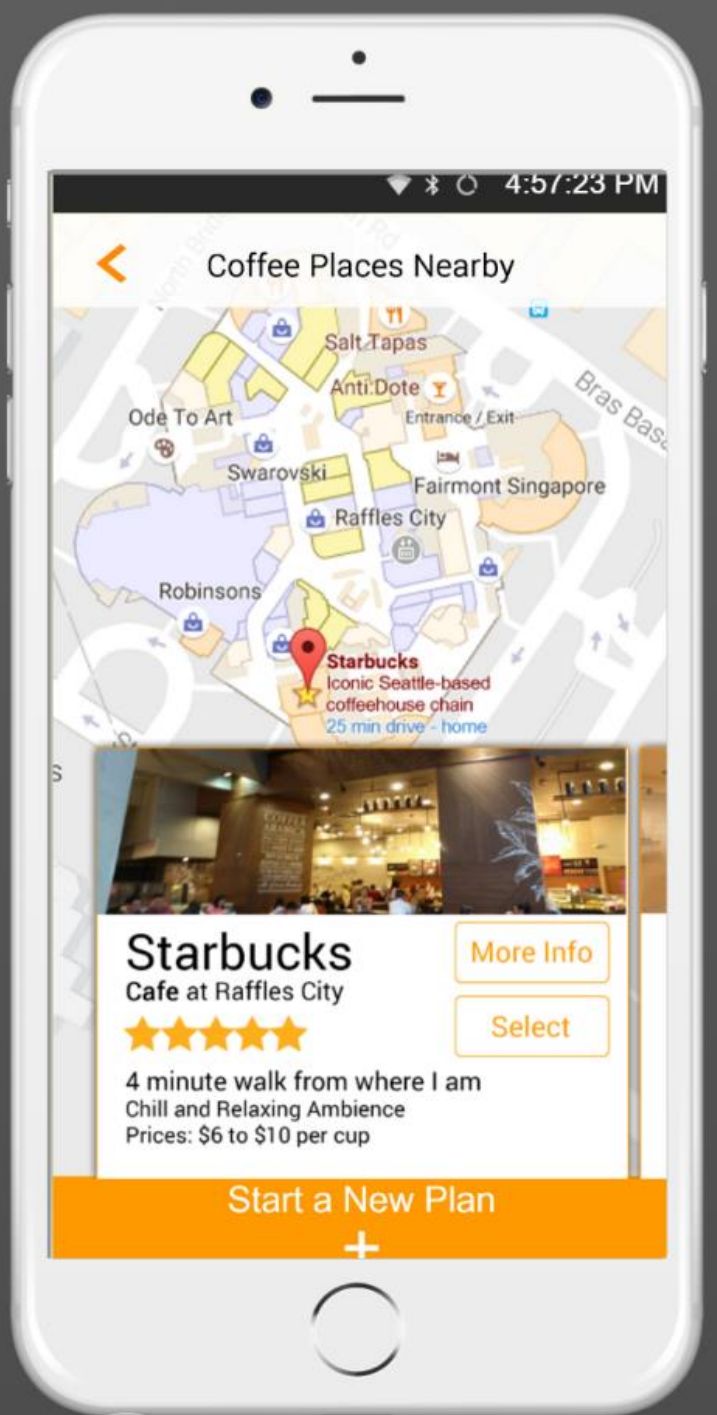
[Select Cafe](#)

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[Crowd Times & Opening Hrs](#)

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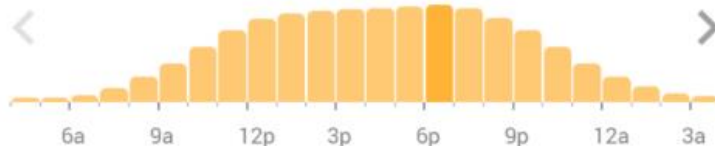


[Add to Plan](#)

## Starbucks Coffee - Crowds & Hours



### Monday



Monday least crowded  
Before 12pm  
After 8pm

Weekly least crowded  
Mondays  
Tuesdays  
Wednesdays

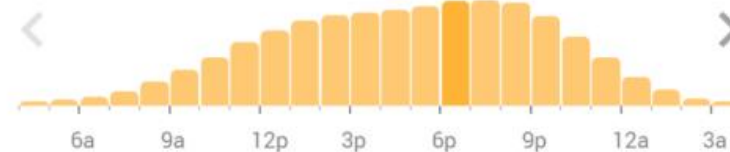
Opening Hours

24 hours

## Starbucks Coffee - Crowds & Hours



### Tuesday



Tuesday least crowded  
Before 11am  
After 8pm

Weekly least crowded  
Mondays  
Tuesdays  
Wednesdays

Opening Hours

24 hours

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9:24:53 PM

eat&drink with Jack  
Wed 23 Nov, 5pm


1 2 3  
WHO WHEN WHERE

Sort by Distance  
Nearer Me City Hall Nearer Jack




**Starbucks** ★★★★★

- Good Quality Coffee
- Expensive (~\$6-\$10)
- Great for Hanging Out




**O'Coffee Club** ★★★★★

- Medium Quality Coffee
- Average (~\$3-\$5)
- Great for Hanging Out



**Costa Coffee** ★★★★★

- Premium Quality Coffee
- Expensive (~\$6-\$10)
- Loud and Casual Environment



**Spinelli** ★★★★★


- Average Quality Coffee
- Expensive (~\$6-\$10)

Select this Cafe

Coffee with Jack Walker

WHO WHEN WHERE DONE

Sort By Nearer to Me Equally Near Nearer to Jack




31 min from here by Bus and Train  
Chill and Relaxing Ambience  
Prices: Average \$6 to \$10 per cup

★★★★★

Bookmark More Information Select Cafe

O'Coffee Club (Raffles City)



Selected : 0

NEXT >

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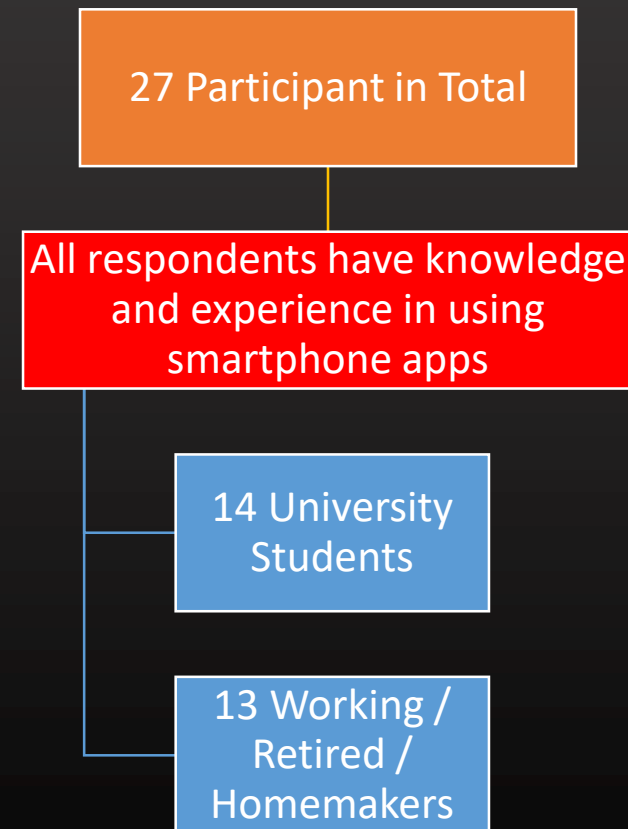
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# 5. Evaluation of Final Design

User Study

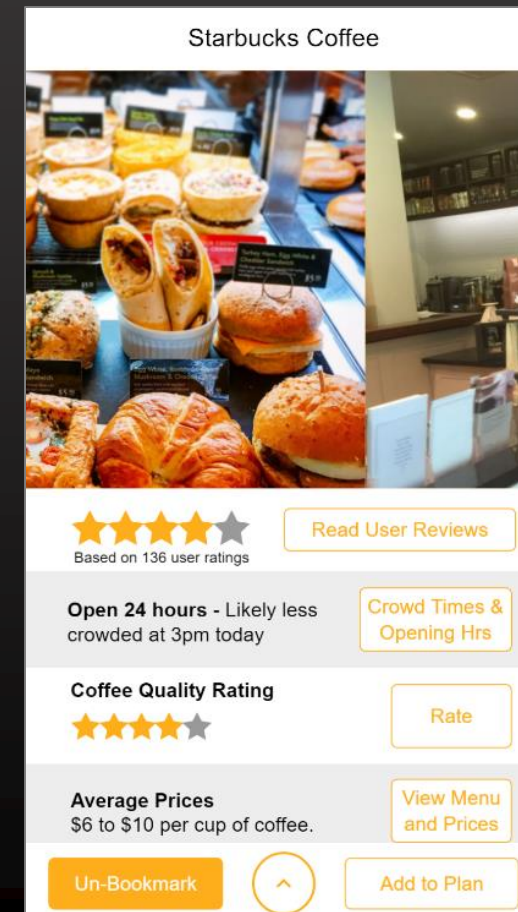
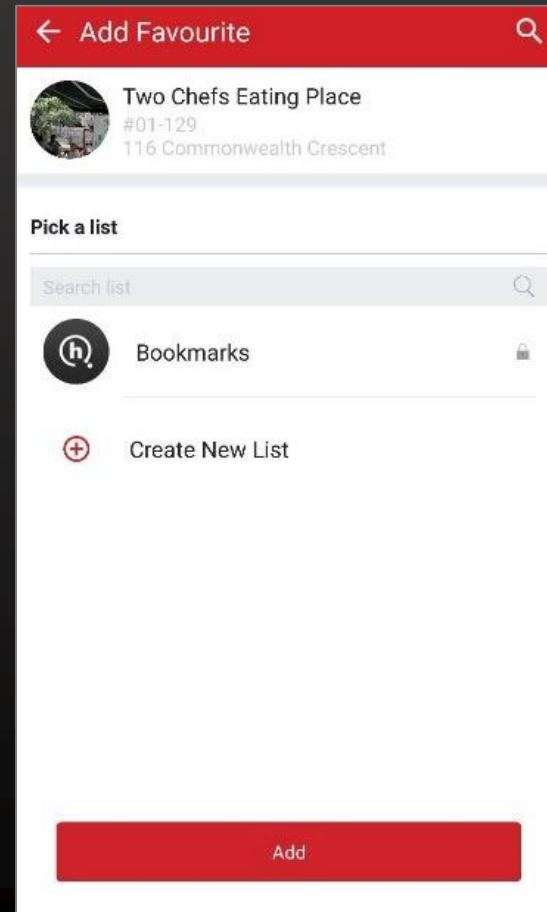
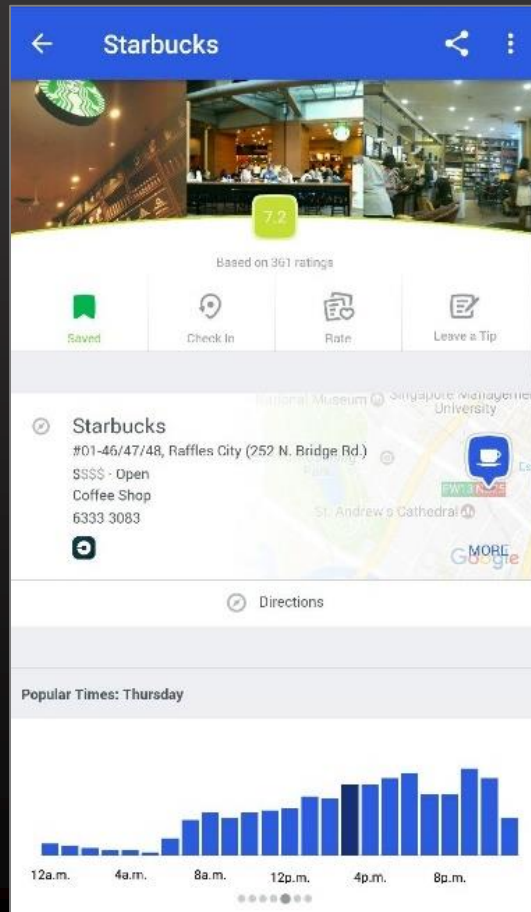
- User Study 5: An Evaluation of the Restaurant Information Page by Comparison with Existing Apps in the Market

- Timed experiment

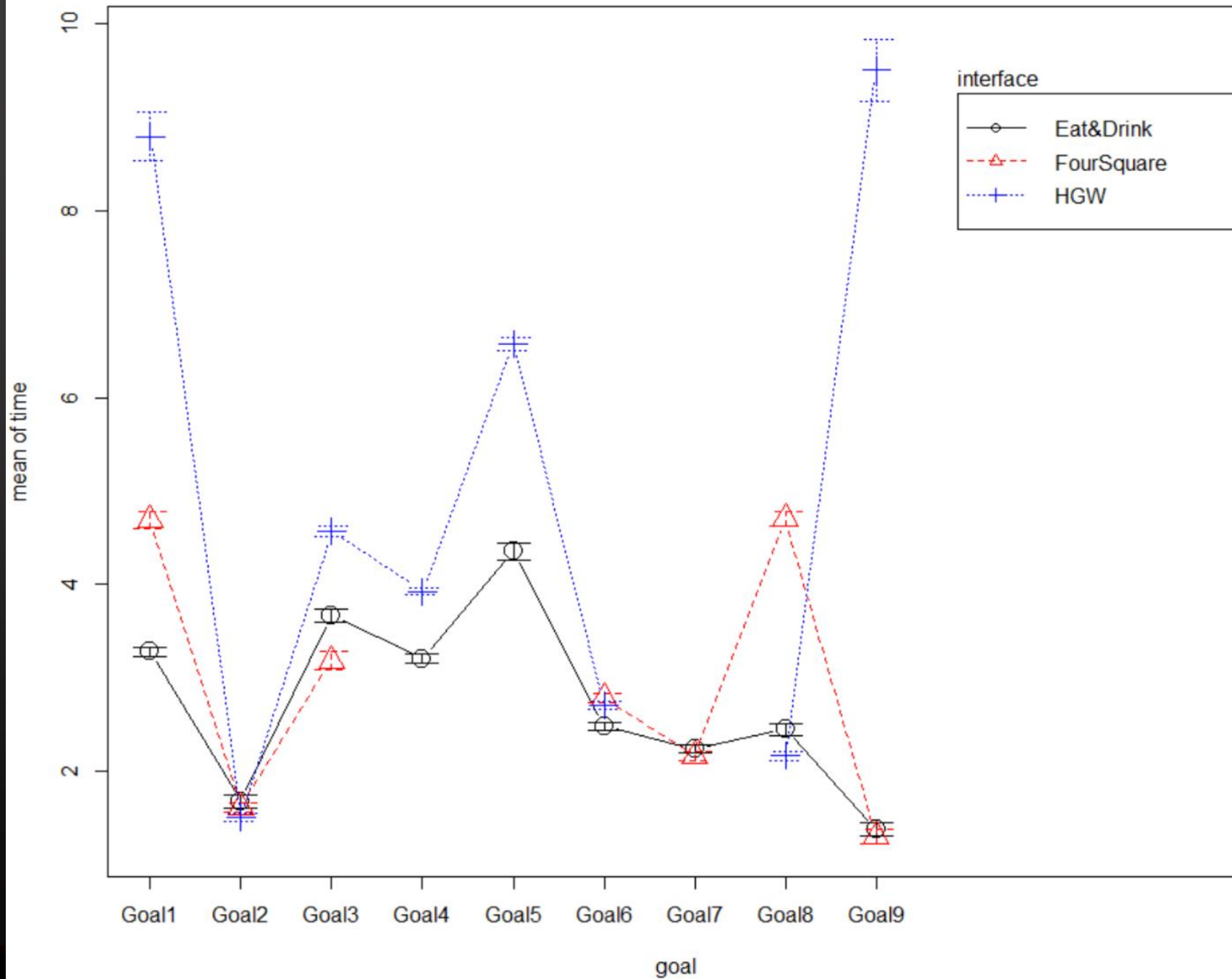


# 5. Evaluation of Final Design

- User Study 5: An Evaluation of the Restaurant Information Page by Comparison with Existing Apps in the Market



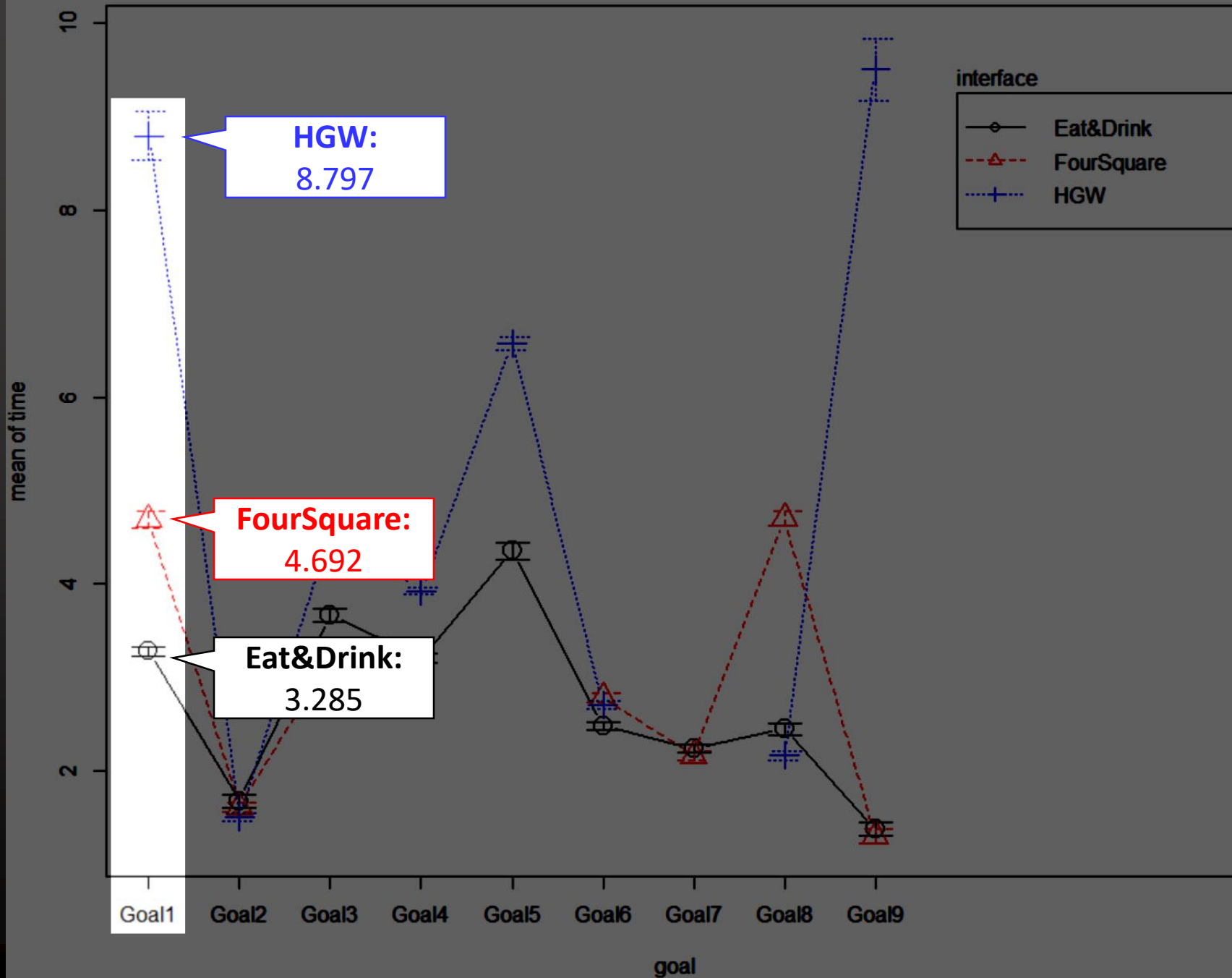
Plot of Means



# Plot of means of the time taken to achieve goals

- Three interfaces
- Nine goals

# Plot of Means

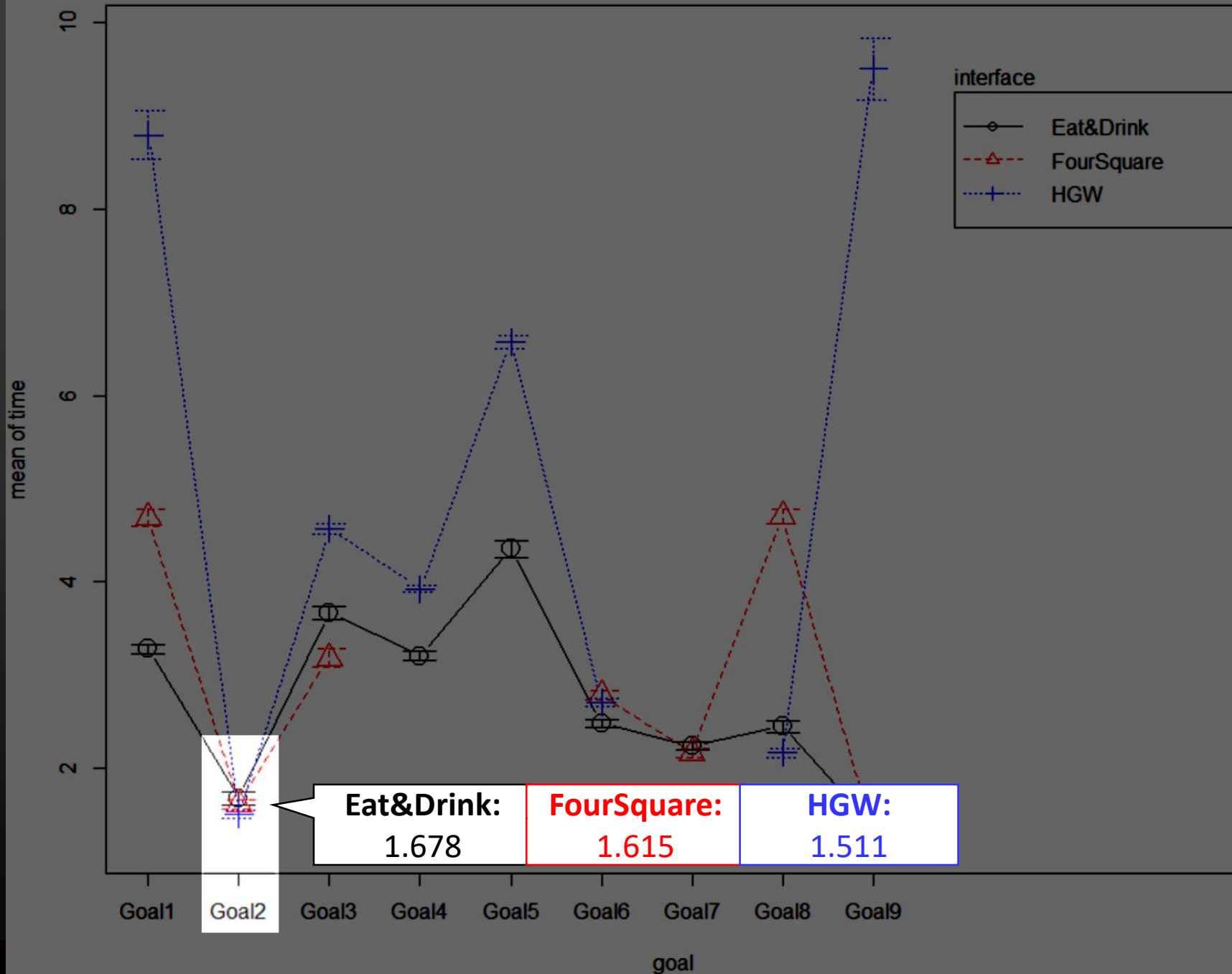


## Goal 1 : Photos

Scroll through 3 different photos of the restaurant / café, to get an idea of what the dining venue looks like.



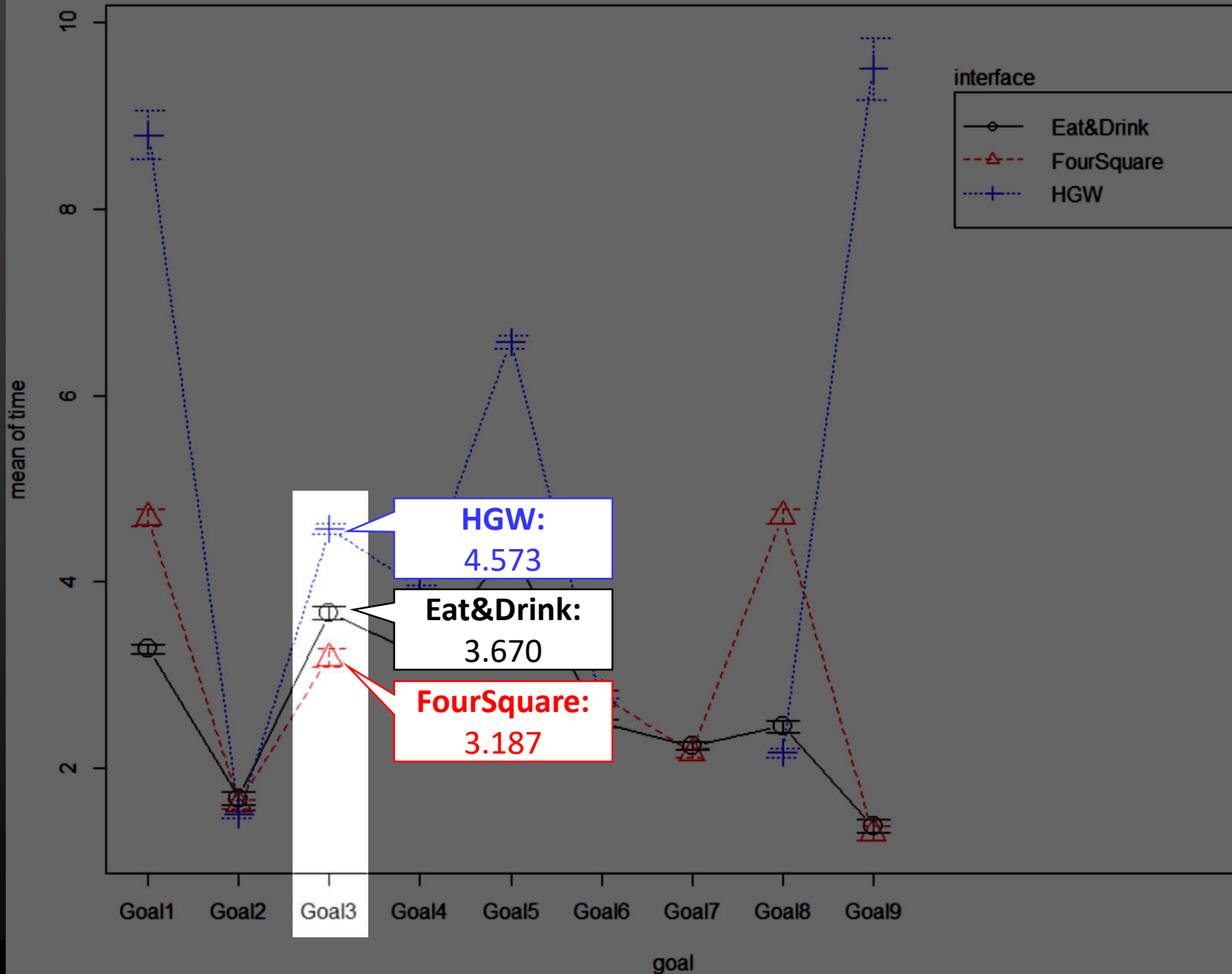




## Goal 2 : Ratings

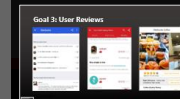
To discover whether this particular restaurant / café is generally good and worth going to, by viewing its rating.

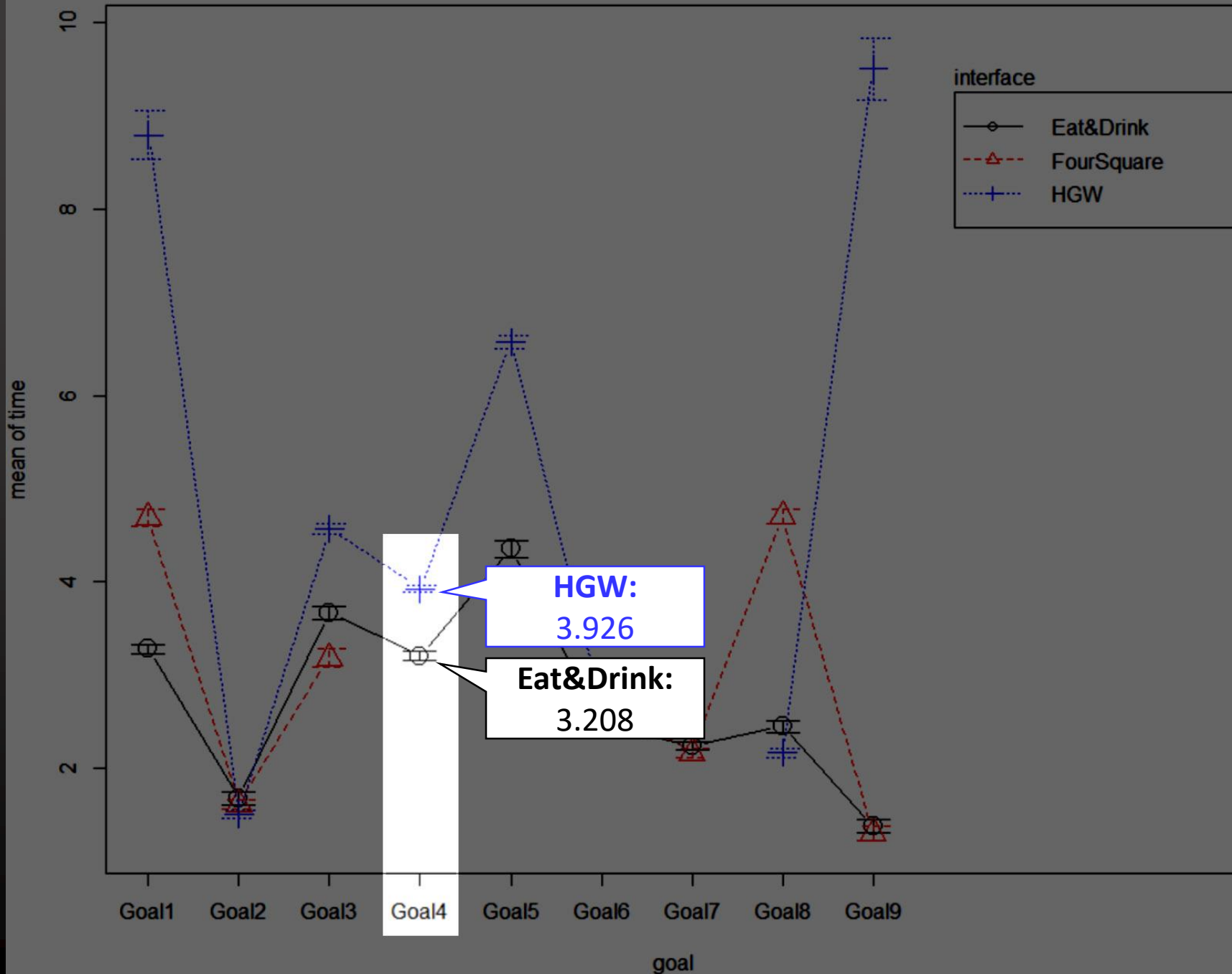




## Goal 3 : User Reviews

To find out what other people think about the restaurant / café, by viewing the user reviews.



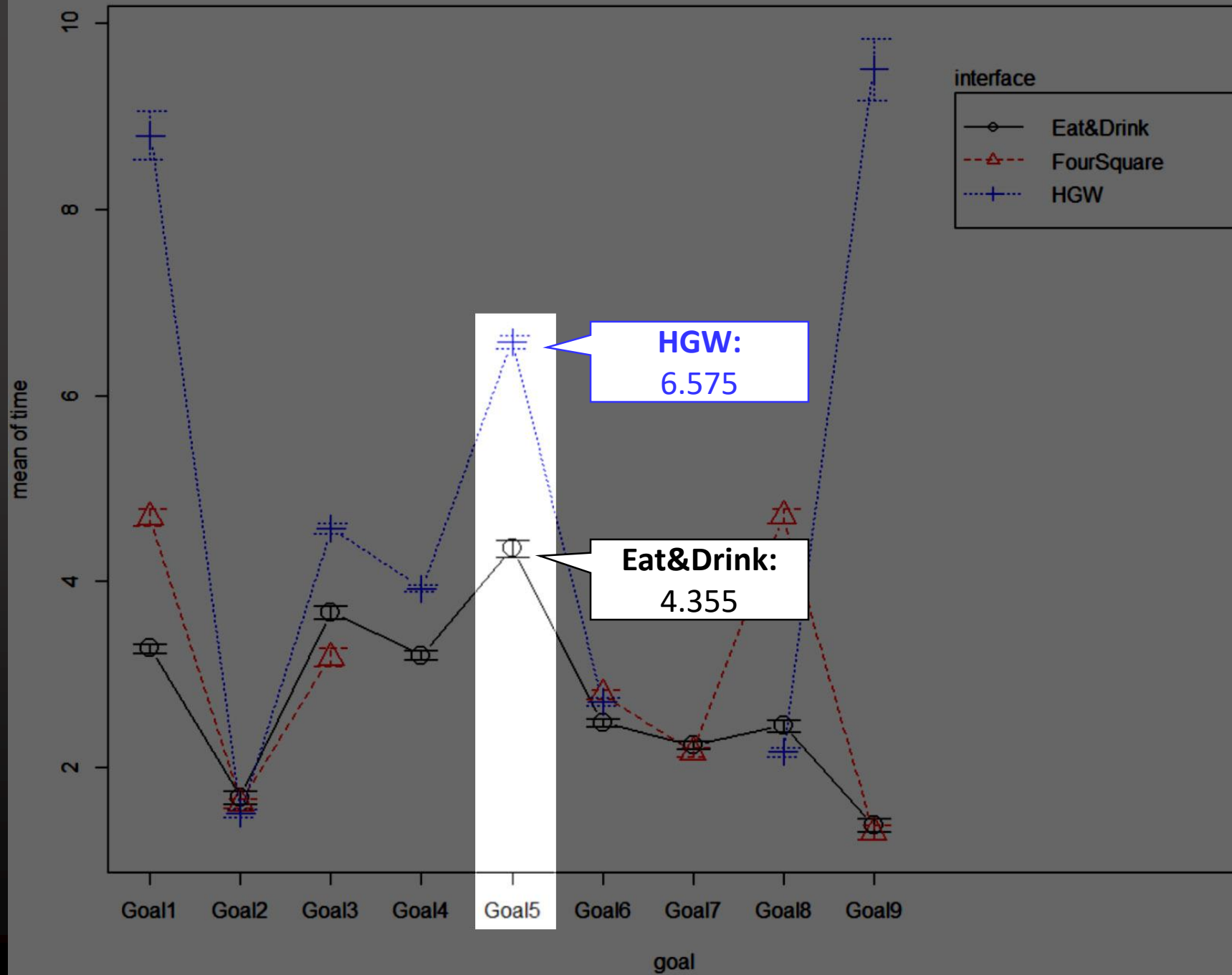


## Goal 4 : Average Price

To discover the rough estimated price range of the restaurant / café.



Plot of Means

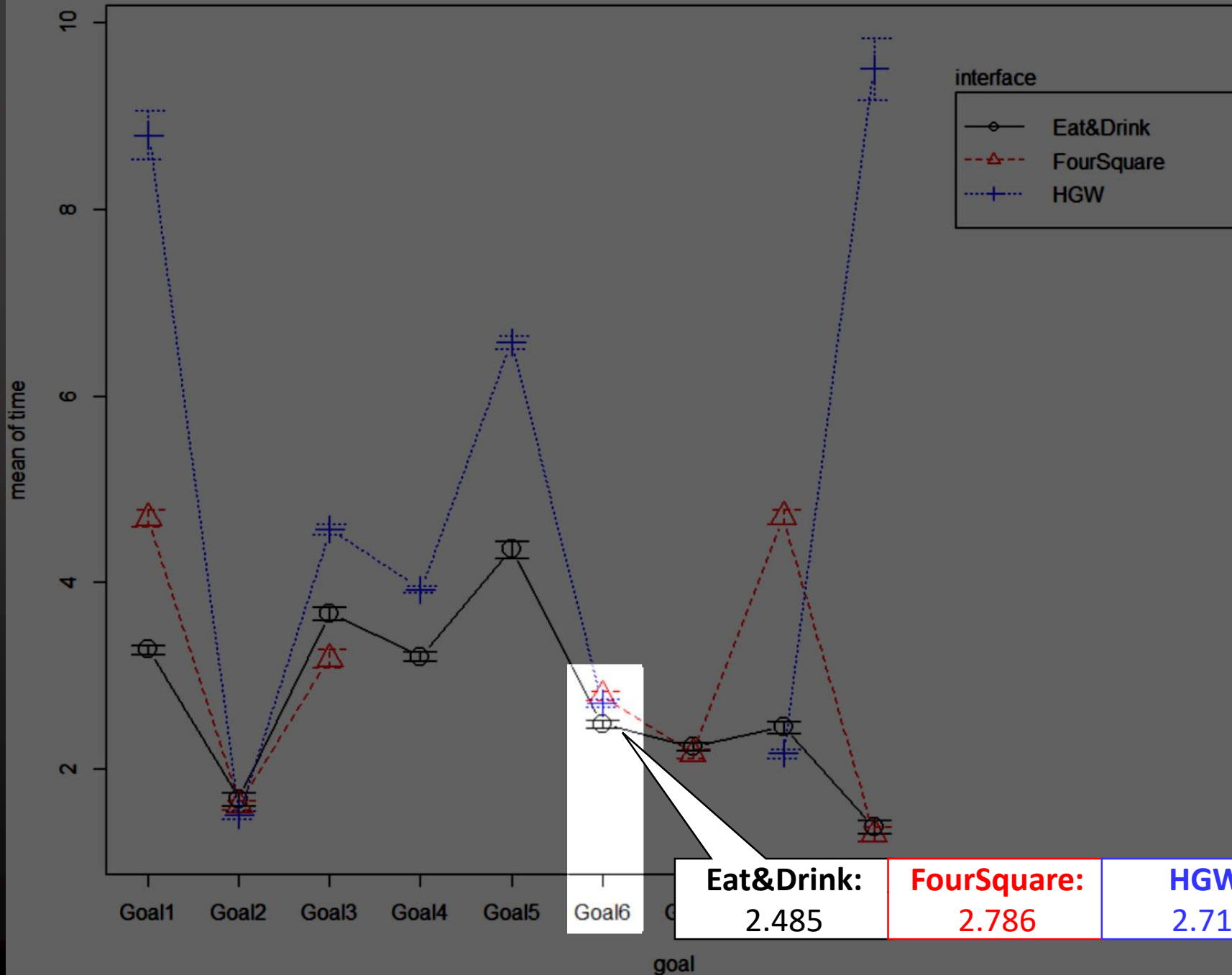


## Goal 5 : Ambience

To discover the ambience of the restaurant, so as to be able to decide what sort of activities are suitable to be carried out there.



Plot of Means



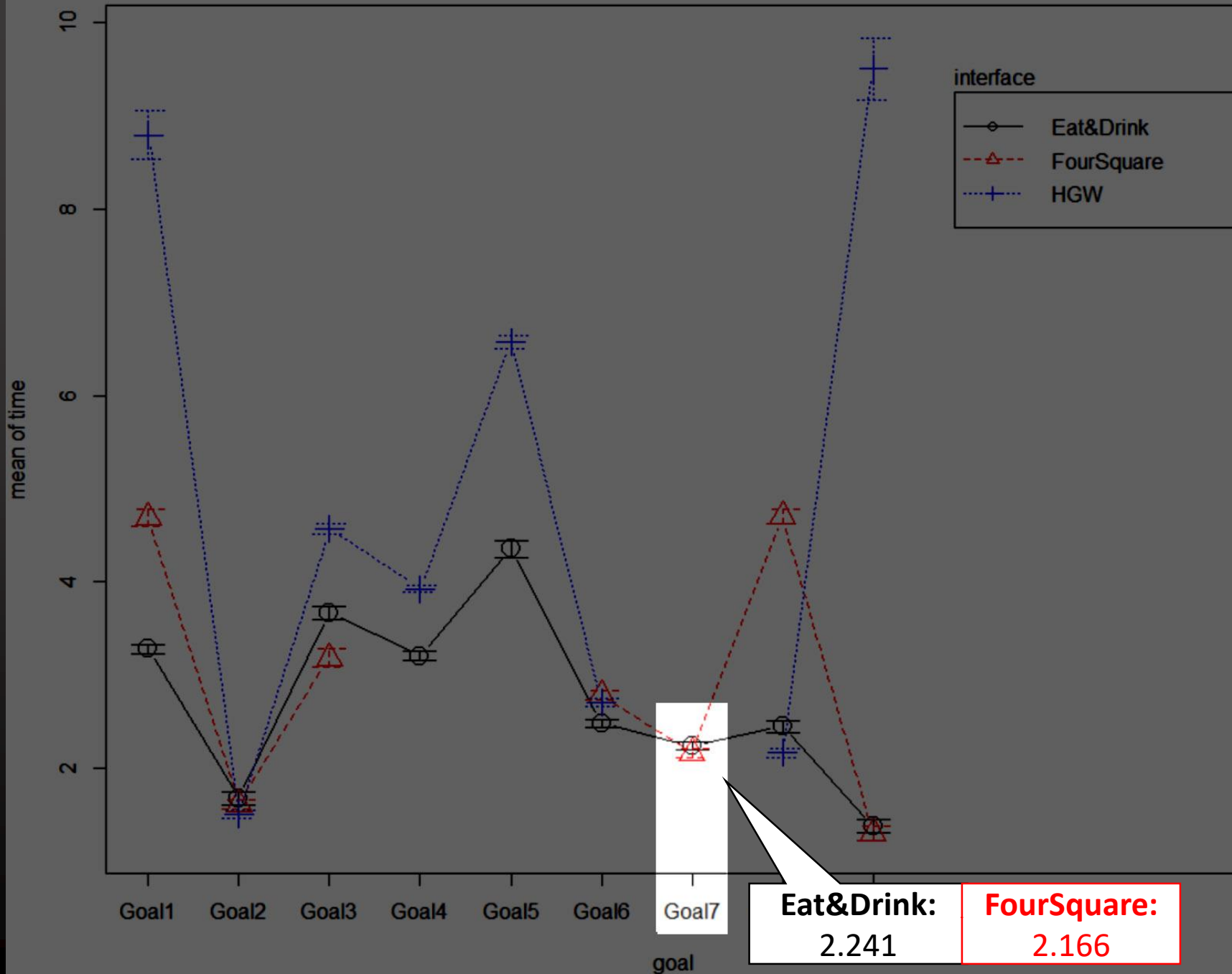
# Goal 6 : Rough Location

To get a rough idea of where the restaurant / café is located, such as the estate, or the nearest MRT station.

<b>Eat&amp;Drink:</b> 2.485	<b>FourSquare:</b> 2.786	<b>HGW:</b> 2.711
--------------------------------	-----------------------------	----------------------

**Goal 6: Rough Location**  
 \* Possible finding the optimal significance between all three interface methods over through comparing the estimated time from each interface (Estate, MRT Station & Estimated Travel Time from each location)  
 \* Only restaurant addresses for the restaurants used in this study were same and significant enough.

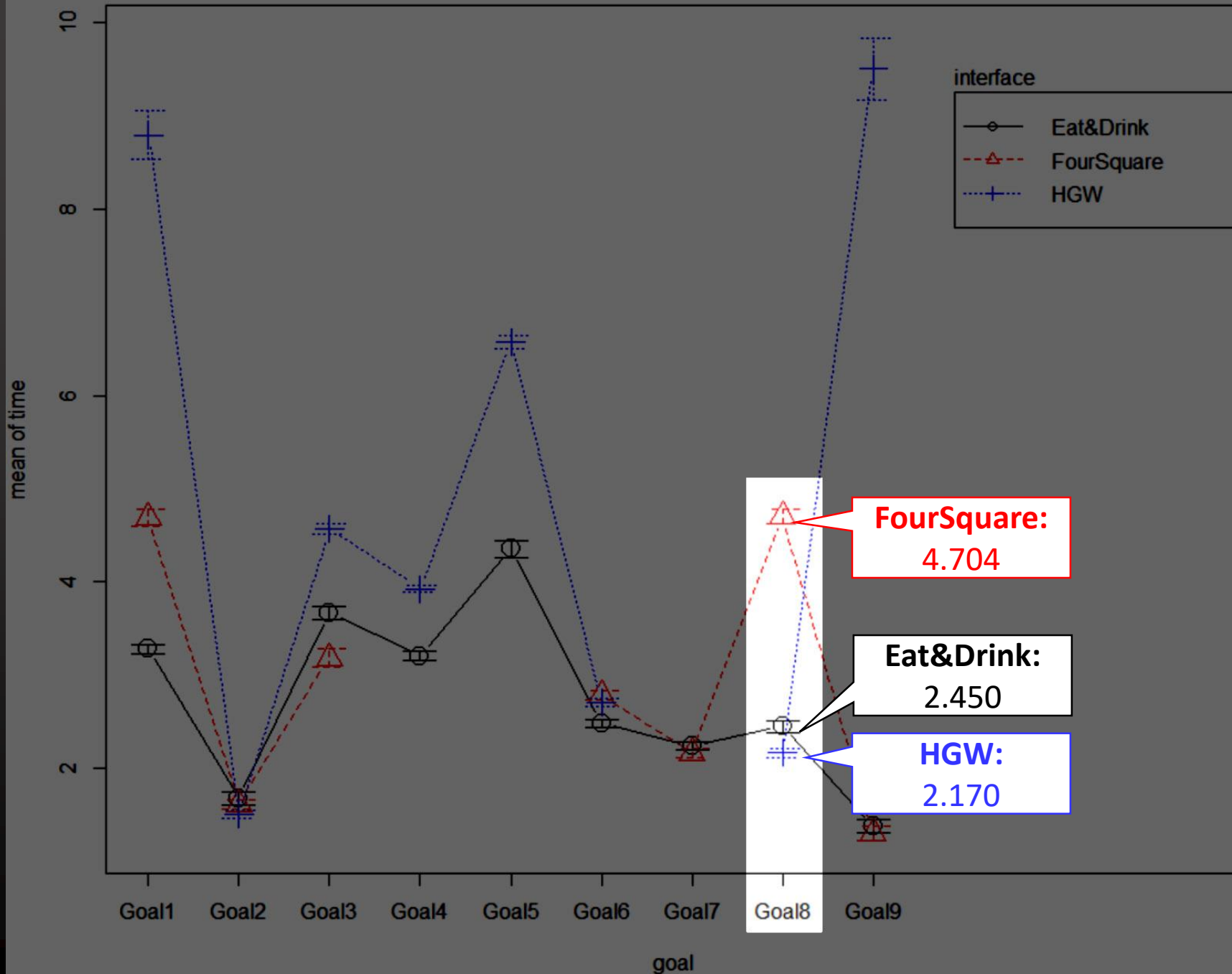
Plot of Means



# Goal 7 : Crowd Timings

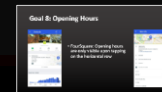
To find out what time the restaurant / café is most likely to be crowded, so as to avoid being stuck in the crowd.



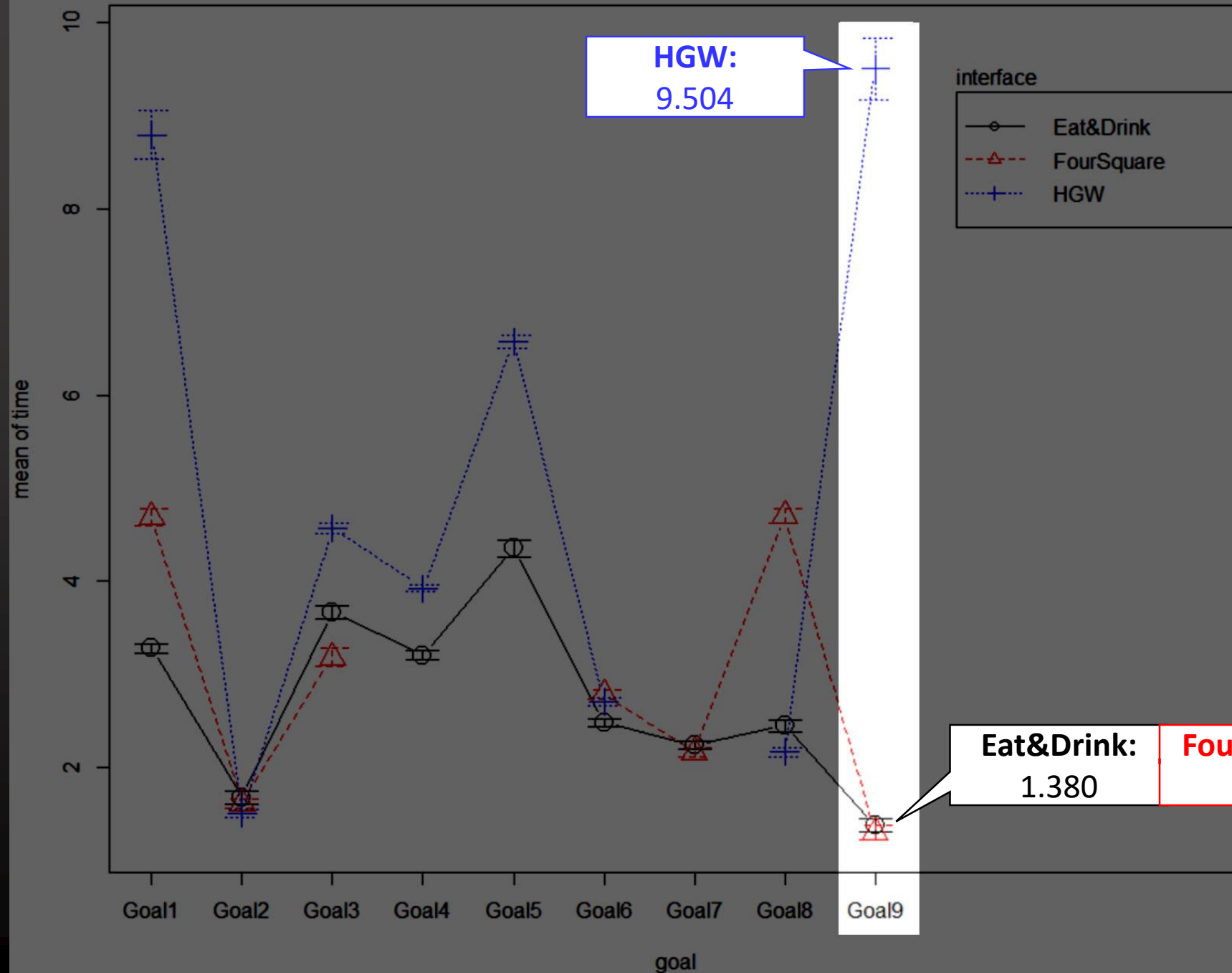


# Goal 8 : Opening Hours

To find out the opening hours of the restaurant / café, for the day.



Plot of Means



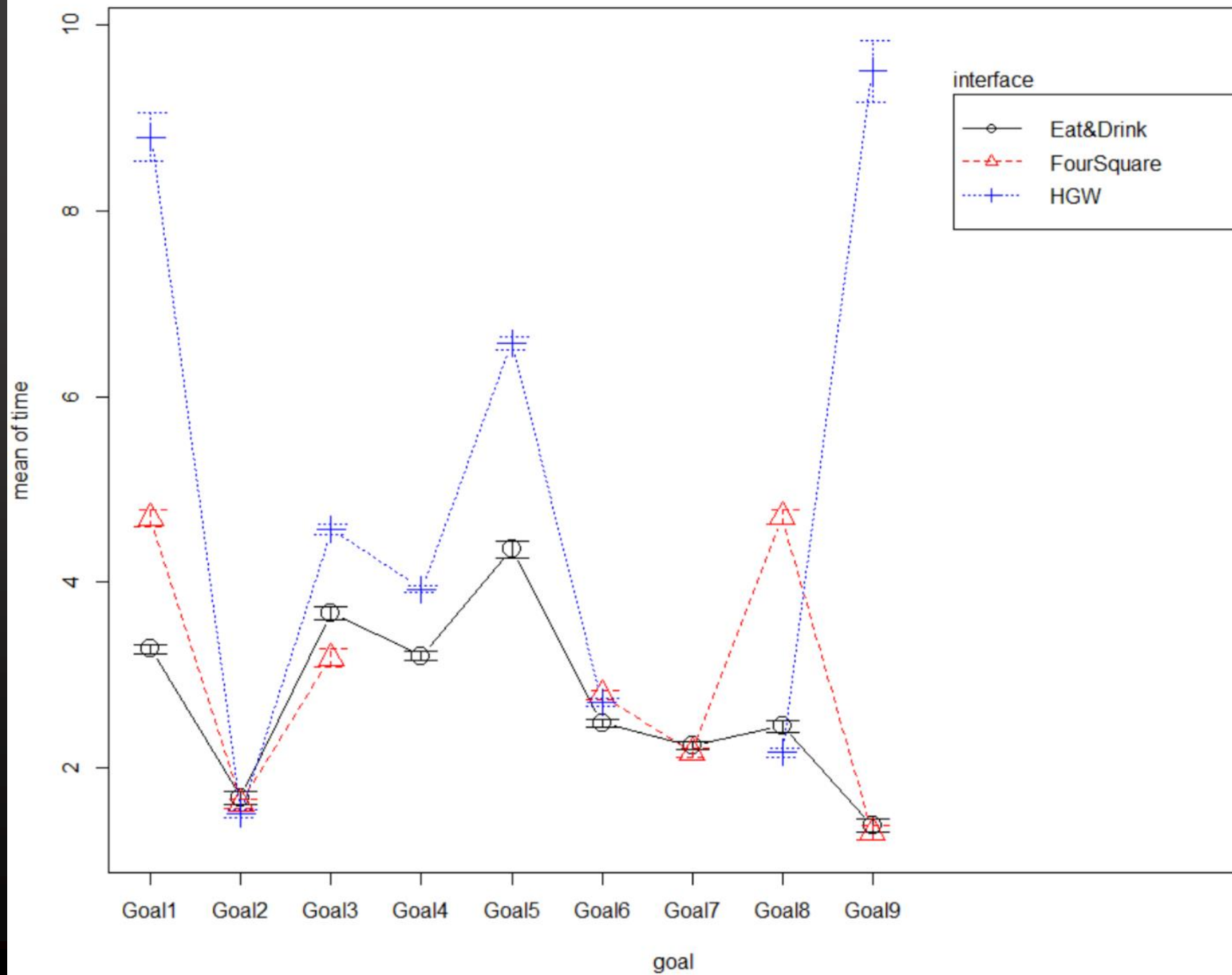
## Goal 9 : Bookmarking the Restaurant

To save this restaurant /  
café into the “bookmarks”  
or “favorites” section of the  
app.





Plot of Means

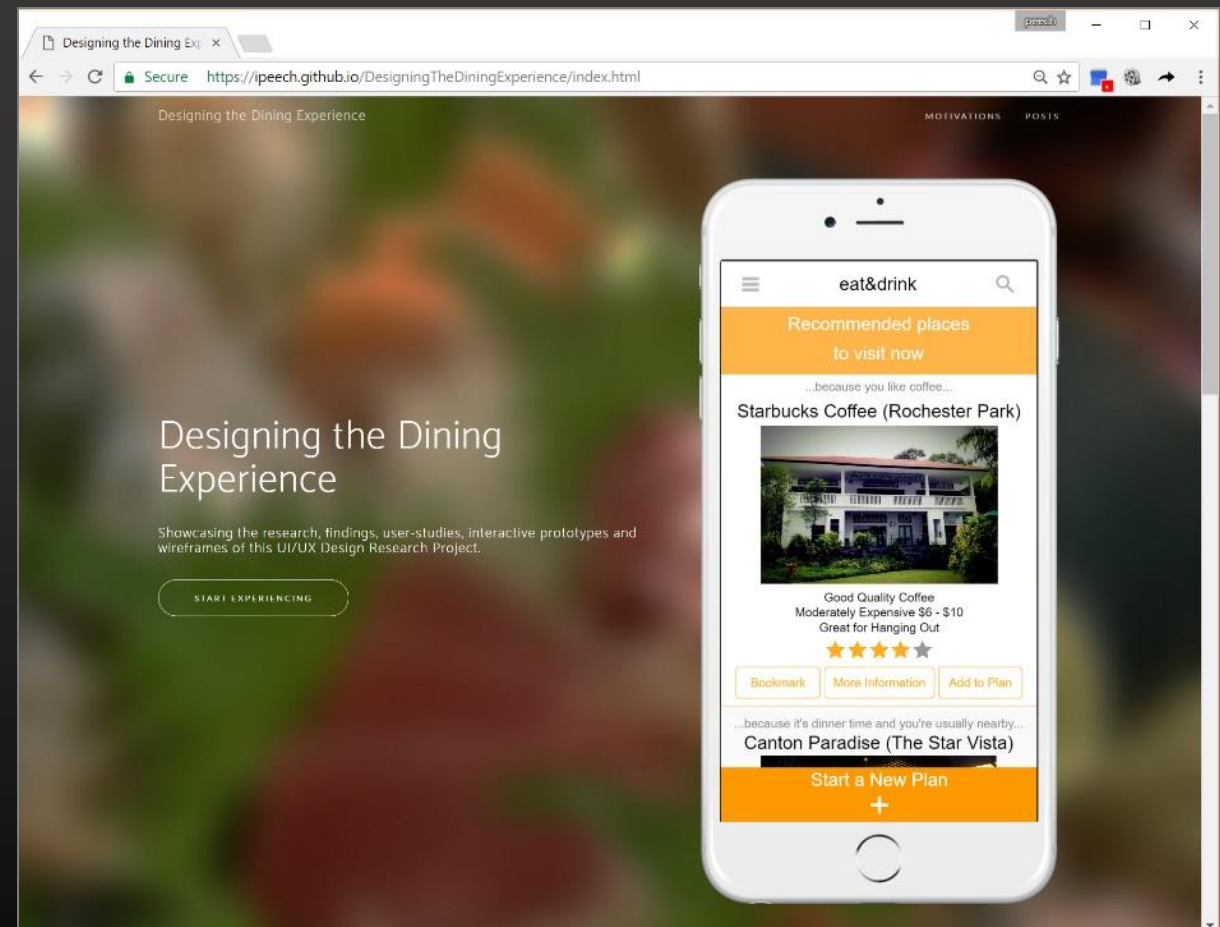


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# 6. Outreach Progress and Statistics

- The “Designing the Dining Experience” website
- Publications on the “medium.com” platform
- Motivation
  - To reach out to the public and to industry players
  - Ascertain their opinions on my research findings, methodology and design decisions.



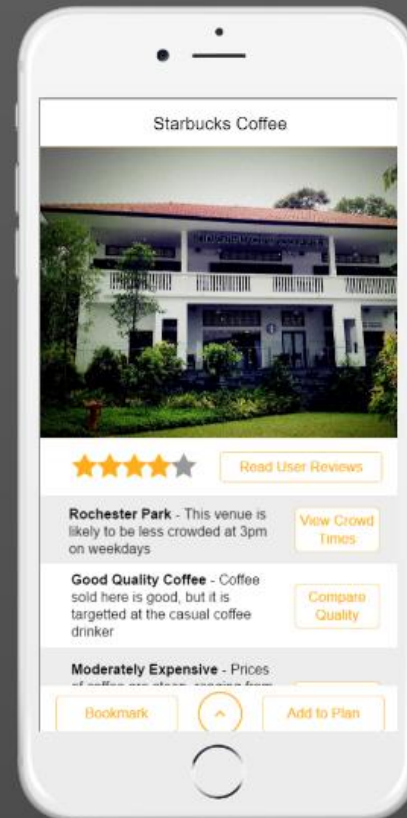
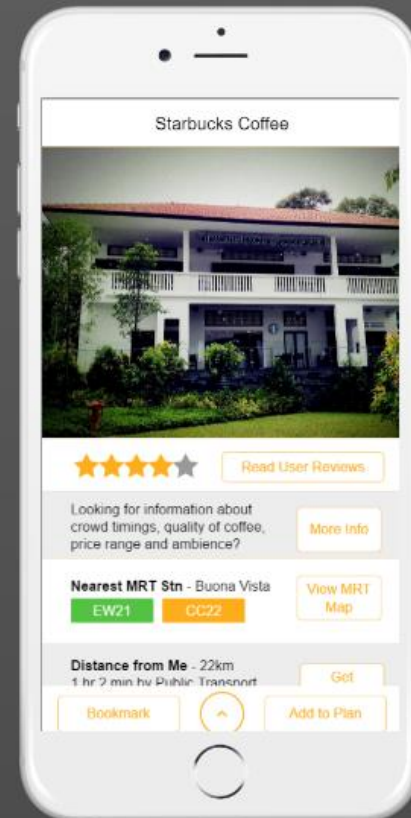
# Interactive Prototype : Information Abstraction of Restaurant Attributes

Try your hand at the interactive prototype featuring different levels of information abstraction in the design of the Eat&Drink app!

Interactive Prototype 1 (left) features an interface with very little abstraction (lots of information is left on the screen for easy access).

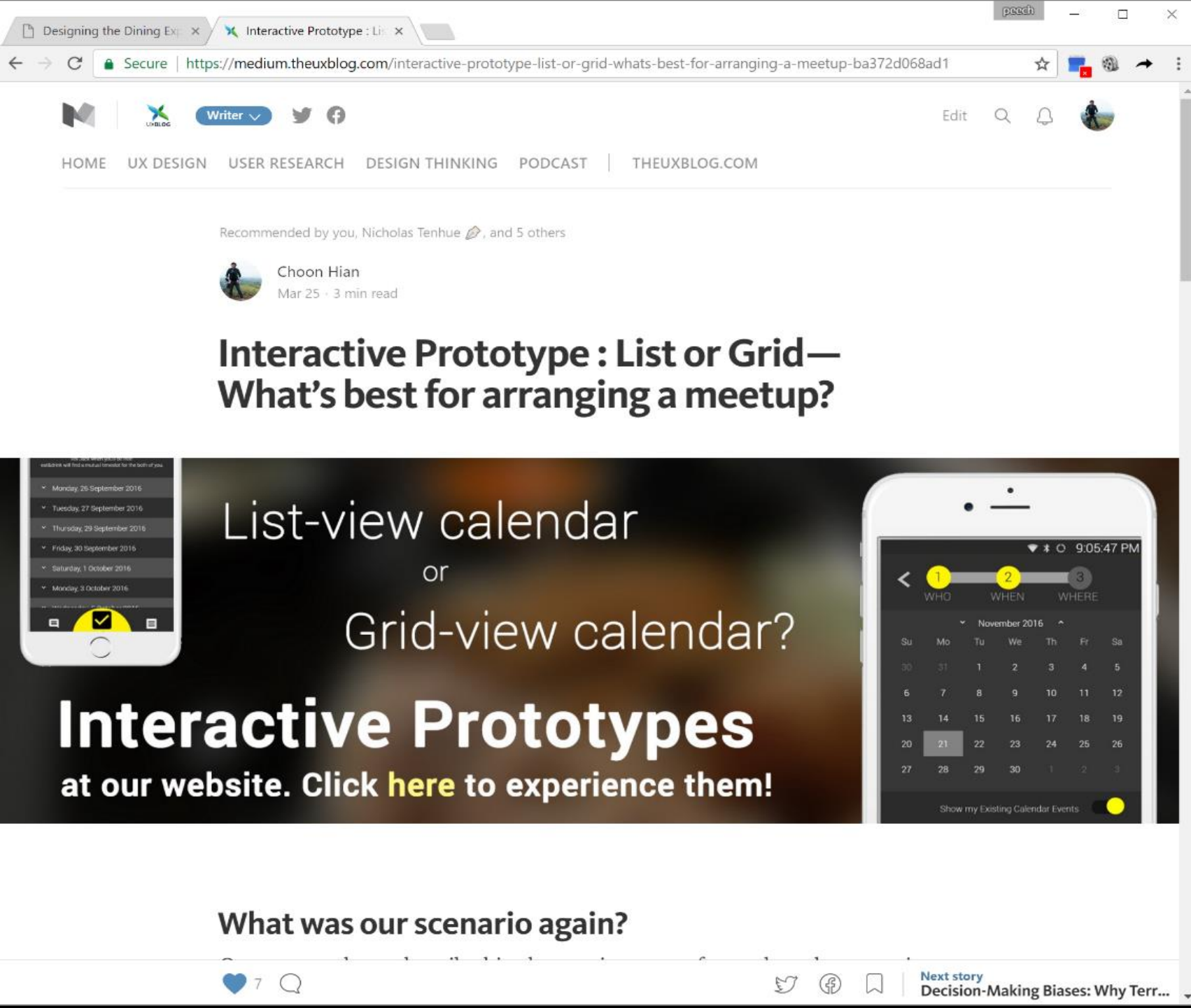
Interactive Prototype 2 (middle) features an interface with lots of abstraction (lots of information is hidden to provide a cleaner interface).

Interactive Prototype 3 (right) features a compromise between the two, and features restaurant attributes that are deemed to be more important to the average user, based on the results of the user study.



- Special feature:

Interactive Prototypes are embedded onto the public website



Publications on “medium.com” social writing platform

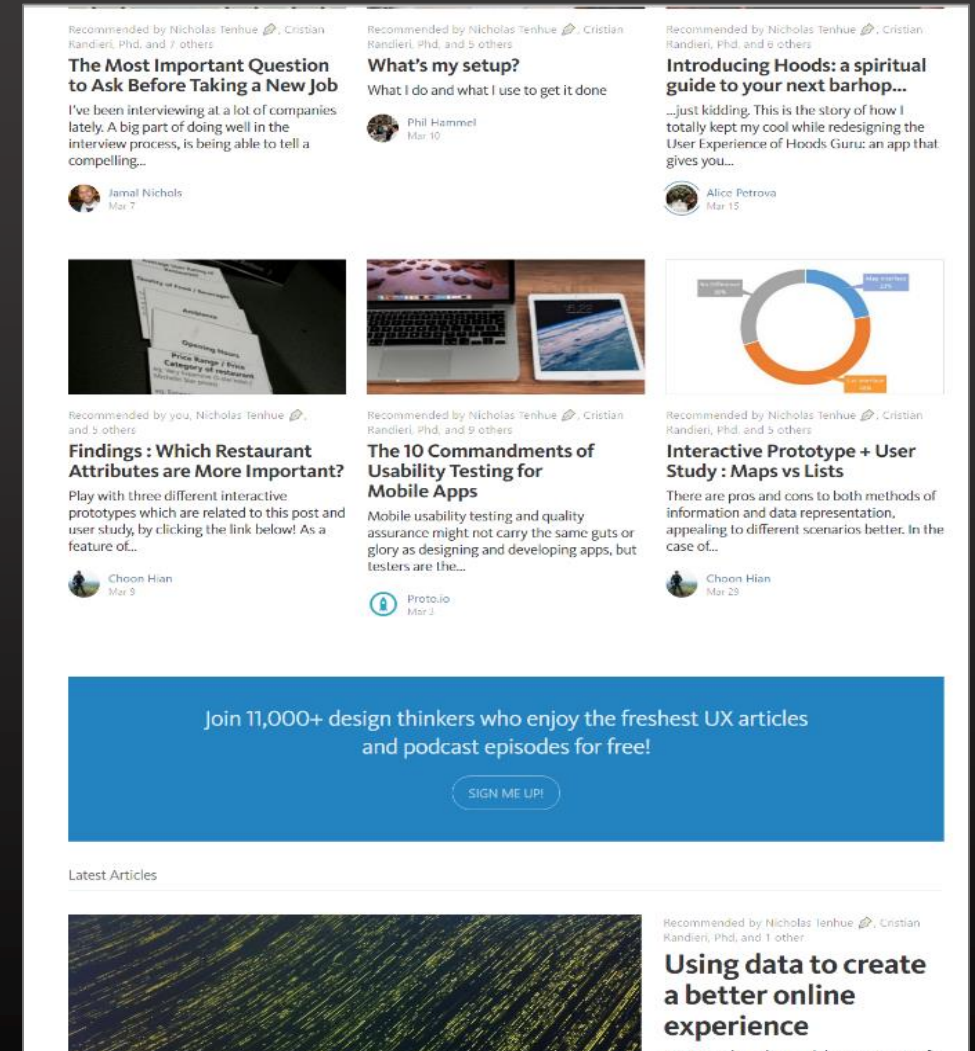
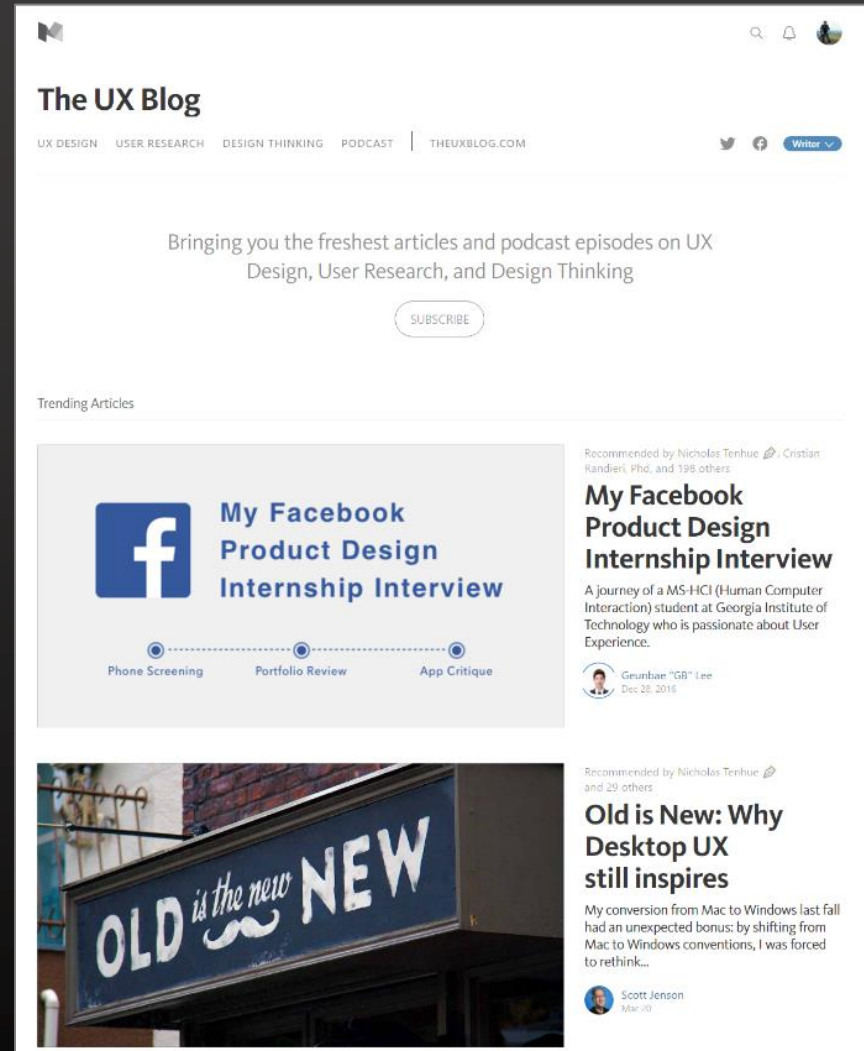
# 6. Outreach Progress and Statistics

## Achievements

- Assigned to be a writer of “The UX Blog”
- Received recommendations and follows by notable personnel on medium.com
- Achieved and surpassed targets for
  - ‘Medium.com’ recommendations, reads and views
  - Website view counts + interactive prototype participation metrics

# 6. Outreach Progress and Statistics

- Founded in 2016
- Features articles and podcasts about UI/UX Design
- Regularly visited by 6000+ UX professionals



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## 6. Recommendations and Follows by Notable Personnel



- Nicholas Tenhue
  - Owner of The UX Blog
  - UX Manager at Orion Health
  - 1.4K followers on medium.com
  - Top posting ~137 recommendations



- Christian Randieri
  - Founder, President and CEO of [www.intellisystem.it](http://www.intellisystem.it)
  - Scientist and writer
  - 5000 followers on medium.com
  - Top post ~365 recommendations

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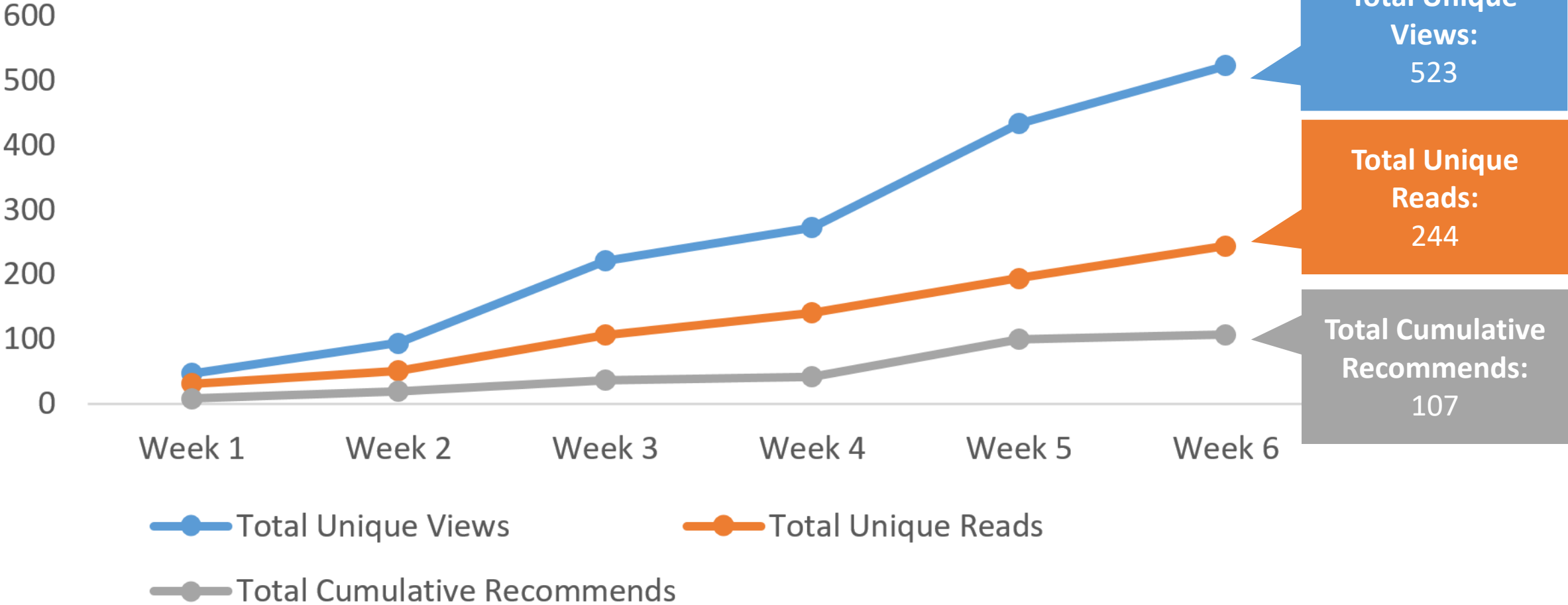
# 6. Medium.com Readership and Recommendation Statistics

- ~ 1 month
- Starting out new in this field

	Total Article Views	Total Unique Reads	No. of Recommendations Per Post	Total Cumulative No. of Recommends
Target Statistics	300	150	Between 5 and 10	50
Achieved Statistics	523	244	An average of 11.1	107



# Chart showing growth of medium.com readership statistics



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## 6. Designing the Dining Experience Website Readership Statistics

	Total Unique Visitors to Website	Total No. of Unique Visitors Using the Interactive Prototypes	Total No. of Times the Interactive Prototypes were Used
Target Statistics	80	20	100
Achieved Statistics	101	31	176

- The tracking mechanism for “using the interactive prototypes” was implemented at a later stage.

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# 7. Summary of Contributions

- Research findings and insights about UI/UX Design
  - Specially catered towards dining scenarios and problems
  - Self-conducted user studies
- Development of Interactive Prototype
  - Showcases all the design decisions made through the course of project
  - Functions as a physical proof-of-concept on how the design decisions integrate to form a product
- Evaluation of design
  - The designed interface was evaluated through timed experiments with users
  - Interface was compared with existing interfaces available in the market
- Public outreach to showcase design decisions to other UI/UX professionals in the industry
  - Public postings on 'medium.com' platform
  - Designer's Website
  - Interactive prototypes developed at various stages embedded onto designer's website



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# Useful Links

## Designing the Dining Experience Website

- <http://bit.ly/DesigningTheDiningExperience>

## Interactive Prototypes and Screenshots

- <http://bit.ly/InteractivePrototypes>

## Full presentation slides

- <http://bit.ly/DTDEPresentation>