

# Panther Carpooling & Parking

## Milestone 4



# Team Members

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# Overview of Milestone 4

- ❑ Group matching algorithm
- ❑ Long and short views of user profiles
- ❑ Interface for ratings and reviews
- ❑ Adding and removing friends system
- ❑ Rider confirmation page
- ❑ Accepting and denying group recommendations
- ❑ Expectations for Milestone 5

# Matching Algorithm





- Objective
  - Efficiently match carpool groups based on user preferences, locations, and schedules.
  - Optimize group sizes while considering various constraints (e.g., driver availability, preferences).
- Algorithms to Implement
  - K-Means Clustering - Group users into broad geographic clusters (e.g., North, East, West, South).
  - Hierarchical Agglomerative Clustering (HAC) - Refine user groups within geographic clusters based on preferences (e.g., gender, smoking).

# Matching Algorithm Demo

## Group Recommendation (Test Users)





### Group Recommendation 1

[JOIN GROUP](#)[DENY RECOMMENDATION](#)

Email	Name	Role	
 North1@my.fit.edu	North1	Driver	<a href="#">VIEW USER</a>
 North2@my.fit.edu	North2	Driver	<a href="#">VIEW USER</a>
 North3@my.fit.edu	North3	Driver	<a href="#">VIEW USER</a>
 North4@my.fit.edu	North4	Driver	<a href="#">VIEW USER</a>

### Group Recommendation 4





[JOIN GROUP](#)[DENY RECOMMENDATION](#)





Email	Name	Role	
 South1@my.fit.edu	South1	Driver	<a href="#">VIEW USER</a>
 South2@my.fit.edu	South2	Driver	<a href="#">VIEW USER</a>
 South3@my.fit.edu	South3	Driver	<a href="#">VIEW USER</a>
 South4@my.fit.edu	South4	Driver	<a href="#">VIEW USER</a>

# Matching Algorithm Demo

## Group Recommendation 2

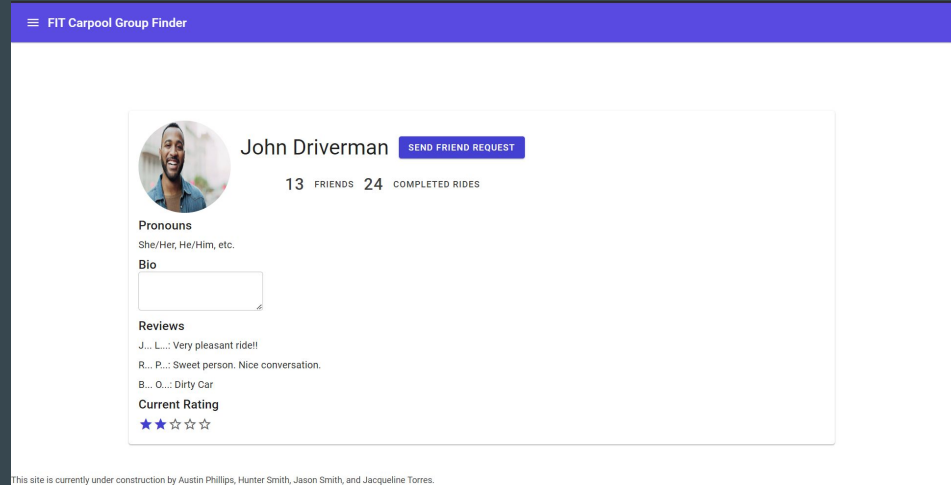
[JOIN GROUP](#)[DENY RECOMMENDATION](#)

	Email	Name	Role	
	West1@my.fit.edu	West1	Driver	<a href="#">VIEW USER</a>
	West2@my.fit.edu	West2	Driver	<a href="#">VIEW USER</a>
	West3@my.fit.edu	West3	Driver	<a href="#">VIEW USER</a>
	West4@my.fit.edu	West4	Driver	<a href="#">VIEW USER</a>


	Email	Name	Role	
	East1@my.fit.edu	East1	Driver	<a href="#">VIEW USER</a>
	East2@my.fit.edu	East2	Driver	<a href="#">VIEW USER</a>
	East3@my.fit.edu	East3	Driver	<a href="#">VIEW USER</a>
	East4@my.fit.edu	East4	Driver	<a href="#">VIEW USER</a>

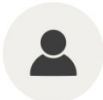
# User-Detail Page: User (Short) View

1. **View Profile:** View a user's full profile
  - a. **User Bio**
    - i. **Name**
    - ii. **Gender**
    - iii. **Profile Picture**
  - b. **User Rating:** View a user's carpooling rating out of 5 stars
    - i. **Reviews:** Users can write reviews for other users in addition to rating them out of 5 stars



# User-Detail Page: Self (Long) View

 FIT Carpool Group Finder



Jacqueline Torres

EDIT PROFILE

13 FRIENDS

24 COMPLETED RIDES

Address

Phone Number

4075555555

Email

j@my.fit.edu

Pronouns

She/Her, He/Him, etc.

Bio

Reviews

J... L...: Very pleasant ride!!

R... P...: Sweet person. Nice conversation.

B... O...: Dirty Car

Current Rating

☆☆☆☆☆

Rider/Driver Statistics

Description	Miles
Total Driving Miles	3
Total Riding Miles	8
Net Driving Miles	15
Net Driving Miles Per Week	6







This site is currently under construction by Austin Phillips, Hunter Smith, Jason Smith, and Jacqueline Torres.



# Ratings (After Trip Page)

- Leave Ratings and Reviews for group members in “After Trip” page
- Ratings and Reviews are visible when viewing a user in User-Details page

### Review Your Trip

Name	Rating	Review
 John Driverman	<a href="#">VIEW USER</a>  ★★★★★	<a href="#">LEAVE REVIEW</a> <a href="#">REPORT</a>
 Ryan Rideman	<a href="#">VIEW USER</a>  ★★★★★	<a href="#">LEAVE REVIEW</a> <a href="#">REPORT</a>
 Amy Rideman	<a href="#">VIEW USER</a>  ★★★★★	<a href="#">LEAVE REVIEW</a> <a href="#">REPORT</a>

[SUBMIT RATINGS](#)

### Leave a Review for John Driverman

Write your review here...

[SUBMIT](#)

[SUBMIT RATINGS](#)

# Friends List

The Friends List has been updated to integrate with the Database

Users can send, receive, and decline friend requests.

Users can also delete unwanted friends.

Any friend list changes which occur on one users friends list will also occur for the corresponding friend's friend list.

# Friends Example

Page 1: User 1 and User 2 have empty friends list

## Friends List

Search for other users...

SEND FRIEND REQUEST

## Incoming Friend Requests

## Friends List

Search for other users...

SEND FRIEND REQUEST

## Incoming Friend Requests

# Friends Example

Page 2: User 1 searches User 2 and send a friend request

## Friends List

tester 2

SEND FRIEND REQUEST

## Incoming Friend Requests

## Friends List

Search for other users...

SEND FRIEND REQUEST

## Incoming Friend Requests

Tester 1

Recently Online

ACCEPT

DECLINE

# Friends Example

Page 3: User 2 accepts User 1's friend request

## Friends List

Search for other users...

SEND FRIEND REQUEST

tester 2	Recently Online	INVITE TO GROUP	REMOVE FRIEND
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## Incoming Friend Requests

## Friends List

Search for other users...

SEND FRIEND REQUEST

Tester 1	Recently Online	INVITE TO GROUP	REMOVE FRIEND
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## Incoming Friend Requests

# Friends Example

Page 4: User 2 deletes User 1 as a friend

Friends List
Search for other users...
SEND FRIEND REQUEST
Incoming Friend Requests

Friends List
tester 2
SEND FRIEND REQUEST
Incoming Friend Requests

Construction by Austin Phillips, Hunter Smith, Jason Smith, and Jacqueline Torres.

# Rider Confirmation Page

Upcoming Trip  
Date: Monday, Oct. 1, 09:00 AM  
Group Name: Morning Class Ride

ACCEPT RIDE

CANCEL RIDE

## Driver's Information



Current Driver:

Contact Information: Phone Number not available



Make and Model: No information available

Color of Vehicle: No information available

License Plate: No information available

## Passengers



First Last

VIEW USER



First Last

VIEW USER



First Last

VIEW USER

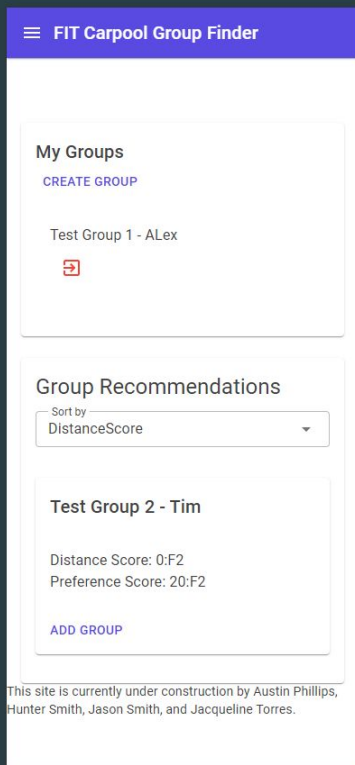


First Last

VIEW USER

09:00 AM Pick-up from Address not available  
09:07 AM Pick-up from Address not available  
09:13 AM Pick-up from Address not available  
09:30 AM Drop-off at Florida Institute of Technology

# Accept and deny group recommendations



- Current Capabilities
  - Allows users to view what groups they are currently in
  - Display groups the user can join that are already formed - only will display users with matching schedules
  - Sort recommend groups by a Distance Score and Preference Score
- Planned Capabilities
  - Toggle for the Group Recommendation section to display system formed groups the user can join
  - Change the button to say "Join Group" instead of "Add Group"
  - Create an overlay for users to view more information about a group



# Progress Matrix of Milestone 4

Task	Completion	Austin	Jason	Jacqueline	Hunter	To do:
Group Recommendation with difference scenarios;	50%	15%	0%	0%	85%	Implement K-Means clustering and HAC
Develop and Test long and short views for user profiles	100%	0%	0%	100%	0%	
Finding Friends, Add and Remove Friends	90%	0%	0%	20%	80%	Further Testing Finalize UI
Interface for entering ratings and reviews	80%	0%	100%	0%	0%	Calculate average rating value Store comments/reviews in database
Integrate accept/deny group recommendations into the database; Once they decline show more recommendations if available	75%	100%	0%	0%	0%	Replace "Add Group" with "Join Group." Display system-formed groups the user can join. Create an overlay to view more details about a group.
Rider confirmation, cancel; Section 3.5.1 of Requirement Document; Know the Driver 3.5.2 of Requirement Driver document	60%	0%	0%	100%	0%	Need to attach the data to complete this page

# Milestone 5

- Group Recommendation test for 32 users (8 east, 8 west, 8 north and 8 south)
- Develop and test a Home page that displays the user's upcoming trips
- Develop and test a Group Management page
- Develop and test After Trip page (adding Comments and Reports functionality)
- Integrate a shortcut to the Florida Tech Safe website
- Create Project Poster

# Thoughts, Questions, Suggestions?

[View Site](#)