

# DESIGN METHODS PROJECT PHASE III

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# RESEARCH QUESTION





## STUDENTS MOVING FROM NON-TECH UNDERGRAD MAJOR TO TECHNICAL GRADUATE PROGRAM

Our research deals with understanding how this transition affects the student's lifestyle and whether it has any impact. If yes, then how?

What motivates students to take up a tech-based graduate program, and how are they coping with it?

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## SO WHAT RESEARCH DID WE DO?

- **Personal interviews**
  - This methodology helped us better understand and empathize with participants while learning more about their individual experiences and situations.
- **Journey Mapping**
  - This methodology established a framework for us to metaphorically walk through a participant's shoes and understand how they navigate the challenges of this program
- **Photo Journaling**
  - This methodology was incredibly helpful in nailing down participants' core pillars for success in the program

# DEMOGRAPHICS OF RESEARCH PARTICIPANTS

CHINA

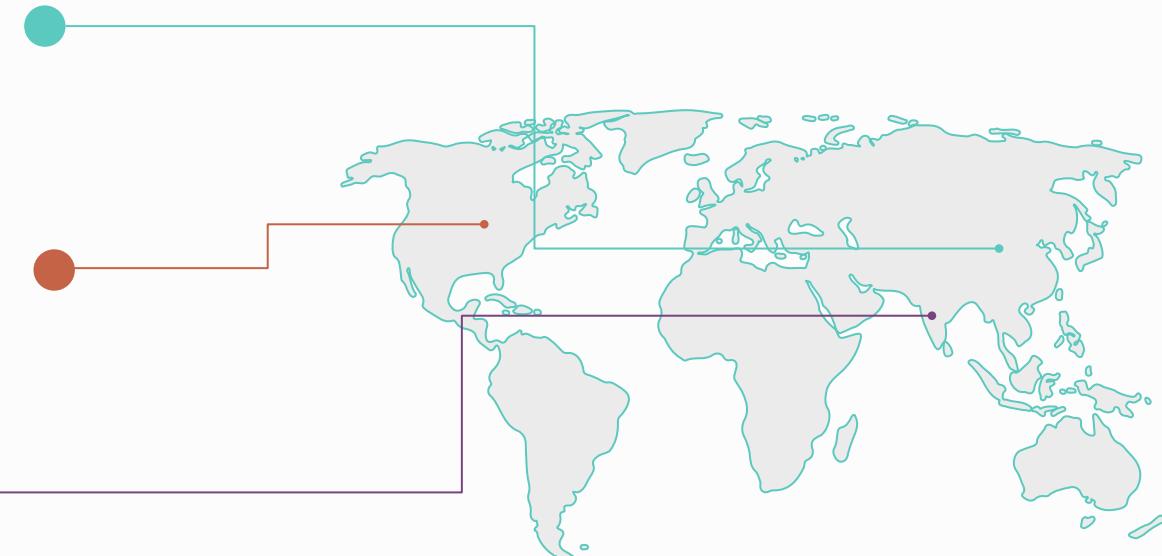
27.27% of the research participants

USA

36.36% of the research participants

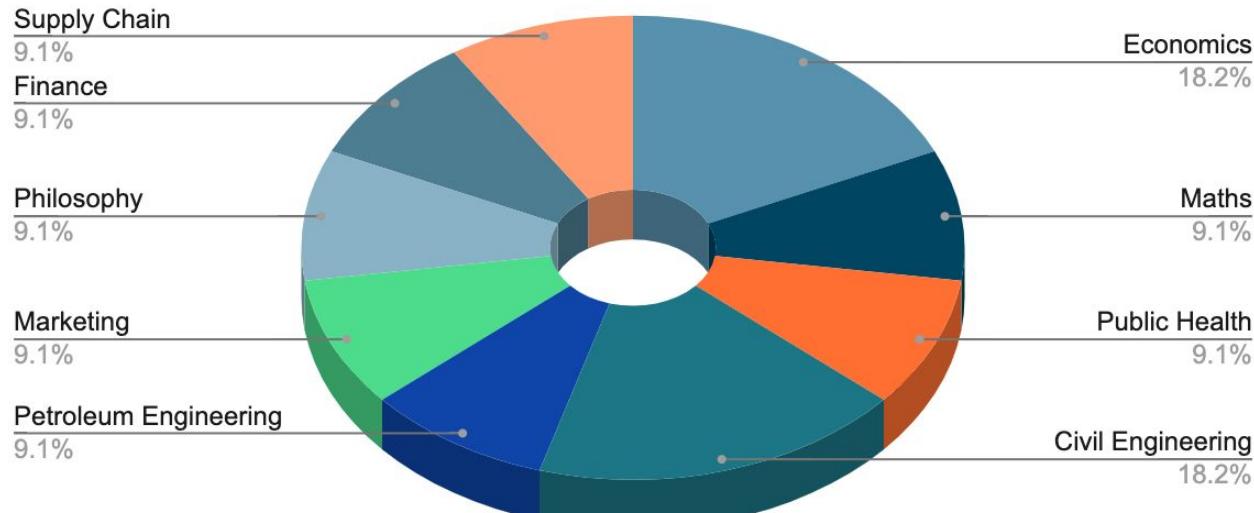
INDIA

36.36% of the research participants



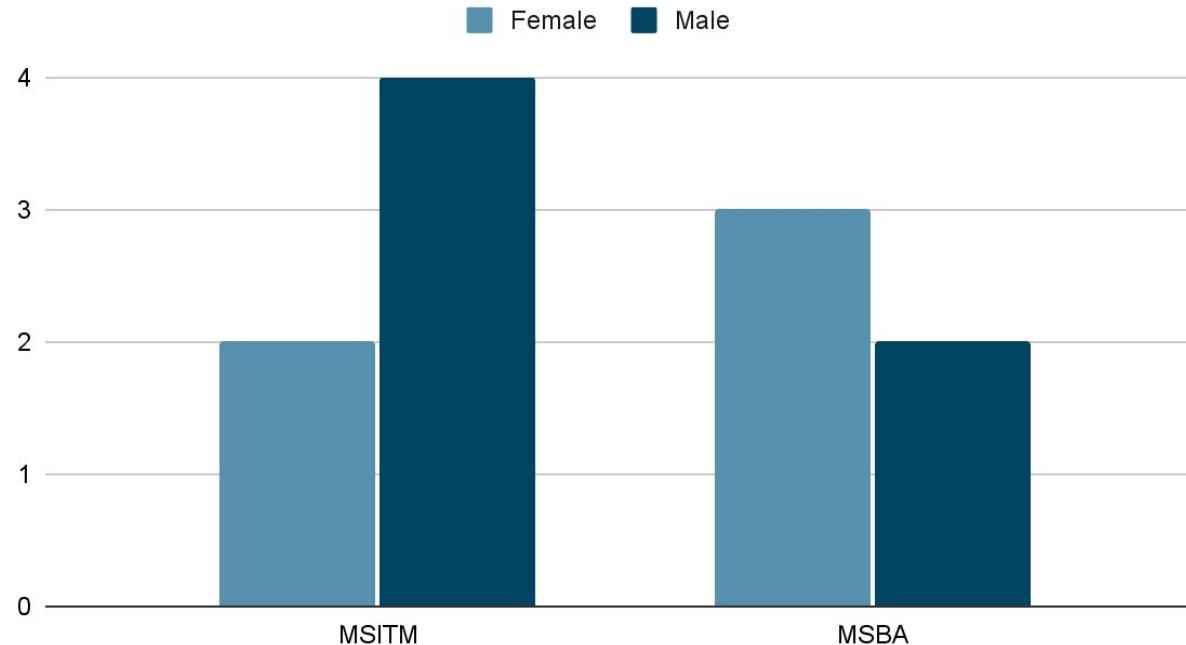
# DETAILS OF PARTICIPANTS

## Undergrad Major of Participants



# DETAILS OF PARTICIPANTS

Graduate Major and Gender



# SIMILARITIES

Here are the similarities we analyzed from the personal interviews:

## Insights:

- Driven to be challenged and step out of their comfort zone
- Preparing themselves to get a higher-paying job
- Career-oriented and determined to achieve their goals
- Fewer job options in their previous majors/industries
- They wanted to network but faced difficulty in some way or another
- Felt stressed out when things were not in their control





# DIFFERENCES

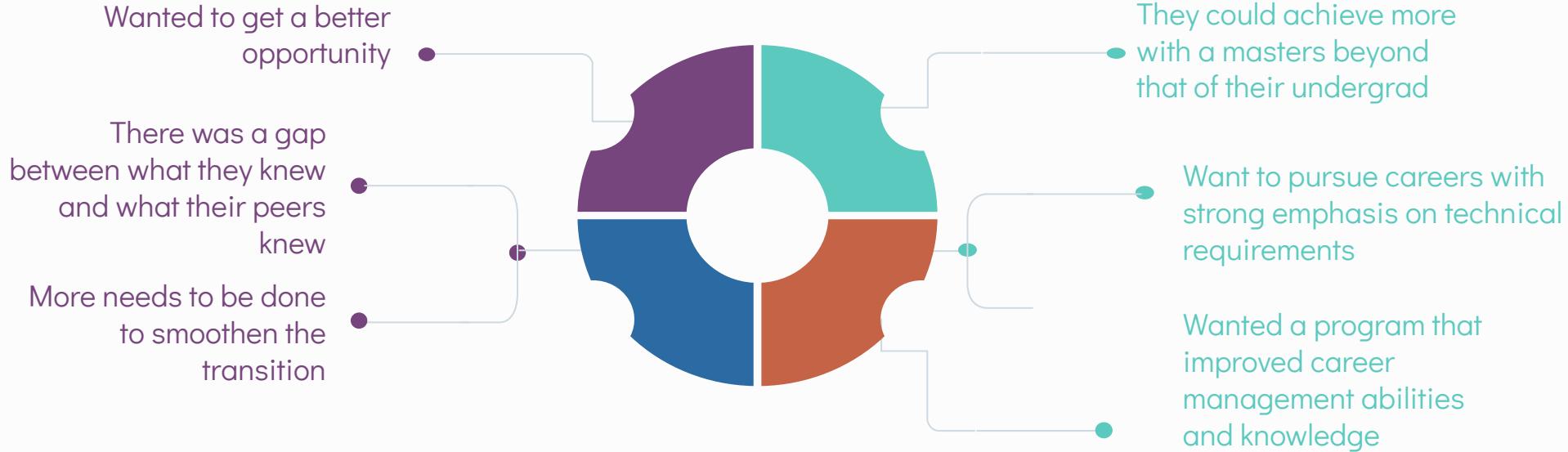
Here are the differences we analyzed from the personal interviews:

## Insights:

- Some participants joined directly from undergrad non-tech majors, while others had some work experience.
- Only a few participants are experiencing imposter syndrome, while others felt that they were doing well in the program and keeping up with concepts.
- We assumed that participants liked to dress professionally but most of them were not motivated to dress professionally every day and preferred to dress comfortably.
- Very few participants believe that they are handling the program well, considering they struggle to complete assignments with ease.
- We noticed that only a few participants were very proactive in completing things, from assignments to personal chores.



# MAJOR THEMES





A PICTURE IS WORTH  
A THOUSAND WORDS

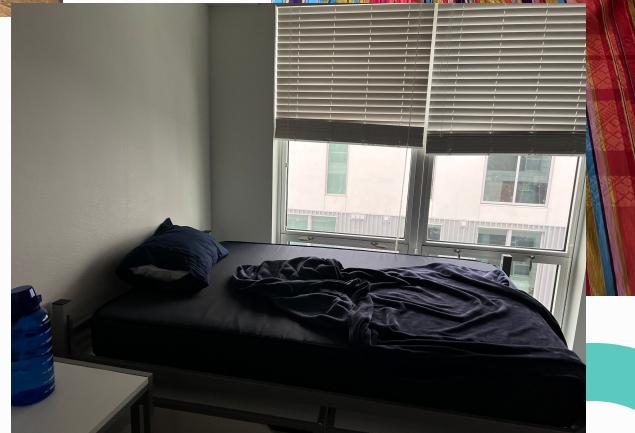
# COMMON THEMES - EMOTIONAL SUPPORT

## Family and Pets



# COMMON THEMES - THINGS THAT BRING THEM JOY

## Bed



# COMMON THEMES - THINGS THAT BRING THEM JOY

## Food



# ASSUMPTIONS AND SURPRISES

## WE ASSUMED THAT ...

They want to change their career path to a more technical one

They think tech is the next big thing

They find tech jobs to get a higher salary

They believe that this one-year program will save their money and time

## WE ARE SURPRISED THAT ...

Not all of them are sure about the program and their decision to take it

Not every participant can cope well with the coding challenge

Not all of them are proactive people and procrastination is more rampant than expected

Not all of them would like to dress professionally everyday



# WHERE COULD WE HELP?

## PAIN POINTS

- Little to no experience with coding
- Learning multiple programming languages at the same time
- Navigating through different IDE's and platforms
- Keeping up with the assignment and project deadlines

## UNMET NEEDS

- Proper academic and career management resources to help them transition fluently
- More time allocated to non-tech background students

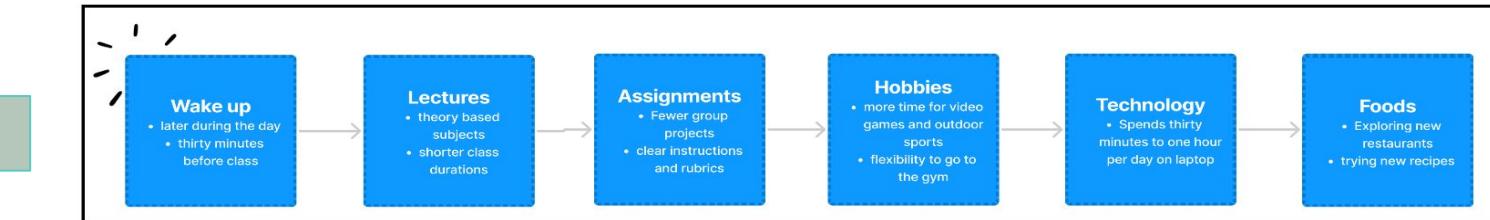
## UNTAPPED DESIRES

- Networking methods in tech industry (Meetups, Hackathons and Competitions) that are different from their previous area

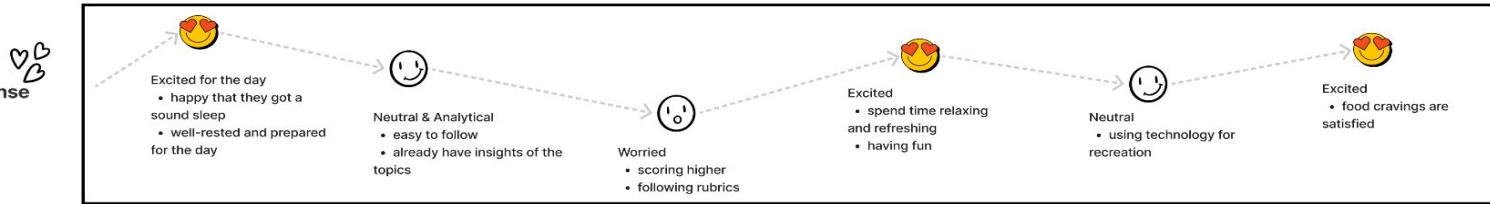


## Day-to-day Journey Map of Participants

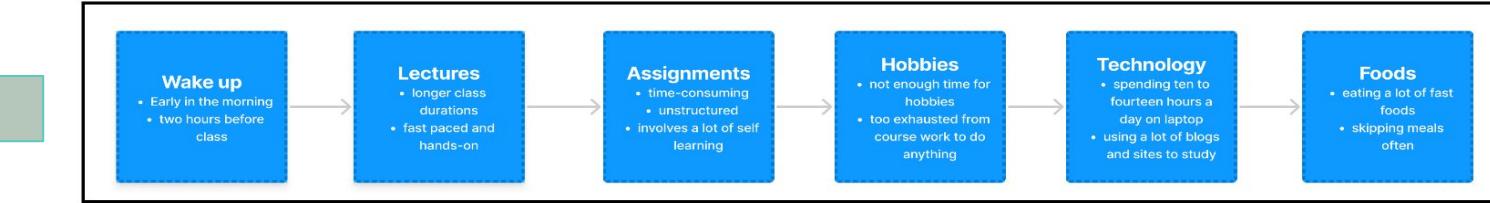
### During Undergrad



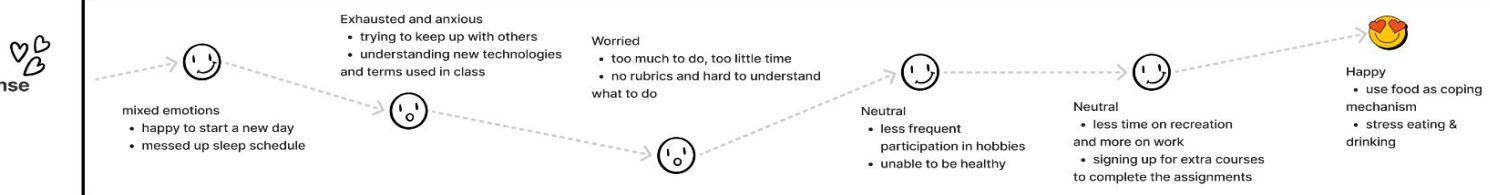
### Emotional Response Touchpoints



### During Masters



### Emotional Response Touchpoints



# CHALLENGE STATEMENT I

How might we smoothen the transition between a non-technical undergrad to a technical master and improve their coding skills to enhance their understanding?



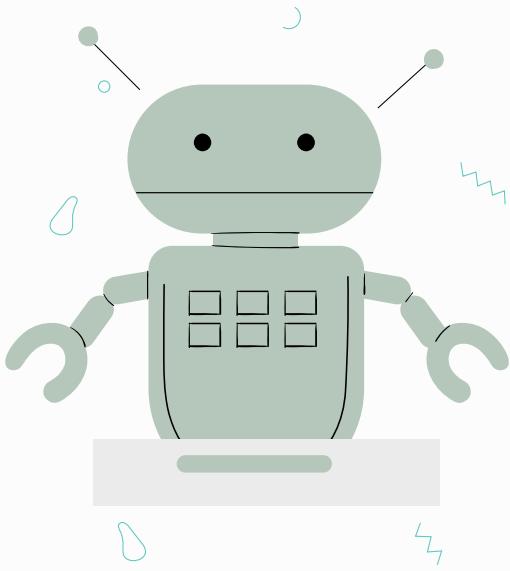
# PROBLEM STATEMENTS

Varun had trouble completing his application programming assignment. He had to learn how to use reactjs and flask. His roommate had already completed his task, but Varun didn't want to ask him for help. Varun wants to figure out solutions on his own.

Samuel comes from an economics background, so he gets anxious when he has to learn multiple programming languages simultaneously and cannot cope with the program's pace. He is nervous and takes more time on self-learning since there are no structured resources available to go through.

Chang had no previous programming experience but needed to finish his data analysis project through python packages and machine learning. He had no idea where to start to learn to code and wanted to ask for others' help.

Even though Ananth majored in petroleum engineering during his undergraduate, he had the opportunity to work on programming during his last semester. It prepared him for MSITM, but he wishes he had a list of technologies used in the program before he started. This way, he would be prepared and comfortable with them.



## CHALLENGE STATEMENT II

How might we lessen the negative impacts of the MS program on students mental and physical health in order to improve their lifestyle?

# PROBLEM STATEMENT

Judy could not maintain her study-life balance due to the heavy workload of the program. She had less time to sleep and hang out with friends, which influenced her physical and mental health.

Apurva is always anxious as there is so much on her plate every day, and she is finding it hard to keep up with it. She is not able to find her mental ability so far.

Kai is having difficulty because the course is moving so fast that it is hard to understand one concept before moving on to the next. Kai, who got through undergrad without going to the library and working now, has set times to work in the library with others to understand concepts and finish assignments, leaving her no time to relax physically or mentally.

Carlee is having a lot of difficulties understanding the code, mainly because there is a heavy expectation that students have in-depth knowledge and experience. There is a gap between what she knows and what everyone else knows—leading her to become a victim of imposter syndrome.

# CHALLENGE STATEMENT III

How might we help students network within an industry they are foreign with, and how can we make them receive better career outcomes?



# PROBLEM STATEMENT

Alisha is facing difficulty in expanding the network in healthcare analytics domain. Since she is coming from a public health undergrad majors, she is finding difficulty to network with people with analytics domain as she has the minimal knowledge in that area of interest. Moreover, she does not have any experience in networking with strangers and someone who is at higher position in an organization.

Ruby is having trouble networking because of language barriers and understanding the technology topics. She became shy and unconfident when talking about things that she is not familiar with.

# PHASE II REFLECTIONS (INTERVIEWS)

## What are we concerned about moving forward?

- We were not sure if we had to perform a structured or unstructured interview
- It was not clear as to how to set boundaries while asking some personal questions
- We did not have a chance to interview people outside of the McCombs MS programs

## What have we learned in phase 2

- We realize that this persona is much more common and each participant could be unique beyond the constraints of the persona.
- People are biased with the assessments of themselves



# PHASE II REFLECTIONS (PHOTO JOURNAL)

## What are we concerned about moving forward?

- Not sure if the prompts were clear enough to aid our research
- We weren't sure about the timeframe during which we were supposed to conduct the research activity

## What have we learned in phase 2

- We were able to deduce more information using photos which we weren't obvious during interviews
- Some participants were shy in sharing their personal photos and concerned about their usage



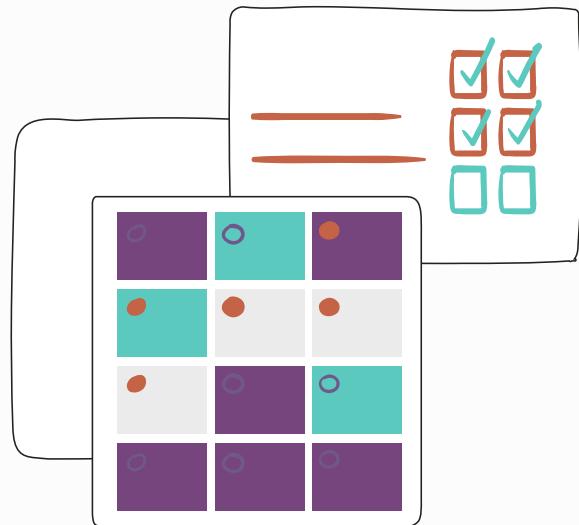
# PHASE II REFLECTIONS (JOURNEY MAP)

## What are we concerned about moving forward?

- We could only get the schedule for one day, which is not enough to gain overall insights
- It was hard for our participants to summarize their daily schedule as it would vary from day to day

## What have we learned in phase 2

- Participants had a considerable variation in their emotions on a single day
- We got to know how their daily routine was changed with their participation in their program



# THANKS!

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