

Group: EMPATHY

Adrian DSa

Yuan (Carrie) Wang

Abhigyan Kaustubh

Lihua (Gloria) Deng

A. Summary of the Assignment

Stakeholder Description

1. Students who travel late at night

Our primary stakeholders will be the students who return home late at night. Some students often study very late at the school library, especially on the night before the exams. Most of them do not have cars or their own means of transport, and as there are very few buses at night, they prefer to walk down to their homes. Moreover, the ones who do prefer to take the bus also need to walk some distance to the bus stop as very few of these are in the immediate vicinity of school libraries. As per our research, we found that they would really like to have some tool to help them navigate to safer locations when walking late at night, hence potentially becoming one of the major users of the proposed design.

2. Employees travelling late at night

Working professionals are typically employees in an organization. They are supportive stakeholders of our product. Firstly, some of these employees prefer going home by bus and would frequently walk to a bus stop far away from their workplace. Secondly, because of the expensive parking fee, many employees would prefer parking cars in a free parking space far from their workplace. Thirdly, they carry valuable office proprietary tools like smart phones, laptops, tablets etc. which may contain some sensitive information that cannot fall in wrong hands. These professionals would be interested in the product which can help them stay safe at night while returning home.

3. People who often back home late at night after entertainment

This group of people are one of the major primary stakeholders of our product. Such individuals like to go to bars, clubs, ballrooms or other entertainment places and many a times, stay back till late at night. They also have the same problem of parking and walking to the nearest bus stop while returning home. Also, the location of these places are often unsafe. It would be convenient for criminals to target such individuals as not only are they potentially unsecure, but also, carry a lot of valuables on them at these places. Hence, they would definitely need some tool to defend themselves against the bad guys.

4. The potential criminals

Criminals are non-supportive stakeholders of our product. The product impacts them negatively since, it will mitigate any type of potential criminal activity occurring around the locality (University District) by informing the people of any safe location nearby. But, another important aspect of this product is that, it will provide people with a powerful tool to identify unsafe streets littered with such activities and avoid them. In this way, criminals will not have a chance to commit a crime and thus, will have a great influence on them to restrict their harmful actions. .

5. Employers of the entertainment places which don't close until midnight or keep open at night

Although these employers are not the primary stakeholders and the major users of the system, they will have a great interesting in this new system. Because if the new system can help to reduce the physical criminal activities around their working place, it will help to cut many expenses for avoiding criminal activities in their

Group: EMPATHY

Adrian DSa

Yuan (Carrie) Wang

Abhigyan Kaustubh

Lihua (Gloria) Deng

working place. What's more, more people will like to come to these entertainment places if they feel it is no danger anymore. Therefore, the result is that the profit of these entertainment places will increase by the effort of this new system.

6. Authorities of places like bars, clubs theatres that are open till late at night.

These individuals are marginal stakeholders of our product. Although these authorities are not the primary stakeholders and the major users of the artifact, they will have a great interest in the success of the system. According to them, this concept can help reduce criminal activities happening around their work place and also, help cut expense in having a night patrol. Also, knowing that there won't be much danger on the streets they take to travel, more people would visit these places at night and increase their revenue indirectly.

7. Police

The Police will be a mixed blessing type of stakeholder of our product. This is because, although the product would be benefitting them by empowering the citizens to indirectly fight crime by being safe, crucial information regarding various criminal activities can be publicly disclosed, if not monitored properly. As our system requires this data from their database, we would need to cooperate with them.

User Research Methods

To define our Design Question and make them more specific, as well as to proceed with our Research Questions, we needed to do user research. Our target users are students and faculties of University of Washington, and people who live in the University district, and the purpose of our design is to offer them relatively safer routes when they go home or travel on foot late at night. Based on the design questions and the methods we learned before in the class, we chose the three following methods to conduct our research:

1. Questionnaire

Questionnaire is among one of the fastest and easiest ways to get general and framework information we need from a large number of people. It can be paper based or web based. We chose the latter primarily for two main reasons: First, the survey will be able to reach more number of people in a very short amount of time. And second, web-survey makes the tasks which follow it, that are collection and analysis of the data that we get from the questionnaire, much easier and faster.

In our survey, we had nine questions including basic questions such as age and gender, and other questions about the "safe perspectives" of the people go home or travel late at night. Most of the questions that we put in here were in a closed and semi-structured to structured format because based on the interviews that we conducted, we found that people are uncertain and a bit confused as to how to articulate answers to probing questions like "why do you think it is safe". Also, oftentimes, we saw that people need to see the options to understand the questions 'frame' better.

2. Interview

Interview is another direct and useful way to understand the users' requirements. Questionnaire and interview are complementary, and both help in gathering different types of information. For example, the last question of our questionnaire "why do you think the above streets are safe at night?" was not answered many of

Group: EMPATHY

Adrian DSa

Yuan (Carrie) Wang

Abhigyan Kaustubh

Lihua (Gloria) Deng

the users. But during the interview, answers to questions like these can be extracted and understood in much detail, which helps significantly in understanding our users.

Besides, interviews help us to communicate with our potential users directly, and are an excellent source of getting valuable feedback on our incipient design, as well as understanding other facets that we as designers, hadn't accounted for.

3. Rapid Ethnography

It is an effective way to understand the users' requirements because it gives us a very direct practical experience of the setting or environment our design will be used in and enables in achieving a deep firsthand understanding of habits and meanings of users around various activities and sites.

This method enabled us in actually understanding the various emotions and thoughts that our prospective users go through, which will help us to build an interface more in tune with them.

Summary of Our Findings

Our weeklong research was pretty comprehensive (with respect to the duration), as we got more than 60 web-survey responses and 12 interviews across a wide range of people from different walks of life, along with lots of hands on experience of how people actually feel and navigate at night.

Regarding web-survey, 23 of them were female and the rest (37) were male. The majority of responses corresponded to people (42) who were in the age group of 18-25 years old, while there were 4 people in the 26-35 range. According to our analysis, most people tend to go home later at night on weekends than on weekdays. The reason why they go home late varied from study (being the most common reason during weekdays), to party (most common on weekends), and to work (second most common reason during weekdays). For the question "What makes you feel scared when walking on a lonely road at night?", only 8.33% people reported nothing scared them. We did not see much difference among other four options, three of which were above 50%, which implied that there was potential requirement of a design to help people to choose safer paths.

To suggest relative safe routines to users, we need to know which streets are safe first. According to our web-survey and interview, the streets which are bright and open or reported a low crime rate are much safer or are **considered** much safer than others. To name a few, these safer streets included the University Way, Brooklyn 41-45 Streets, and so on. Based on our own experience, isolated places which were not properly lit or which didn't have many 24x7 open shops in vicinity were potential threats.

Besides, people who answered more than one scaring thing tend to go home early to avoid them. For our design, these things are the information we need to collect and report. Based on the information, when we recommend routes to our users, we will try to avoid these places and suggest the relatively safer option.

The interviews not only confirmed the various things in the survey, but it also provided with various perceptions of potential users and many useful preferences and suggestions. For example, from these interviews, we were able to get that the users would like to use routes that had cameras or some other surveillance device present. Also, we were able to draw attention to the fact, (we saw this in our Rapid Ethnography technique as

Group: EMPATHY

Adrian DSa

Yuan (Carrie) Wang

Abhigyan Kaustubh

Lihua (Gloria) Deng

well), that many of the users preferred to listen to music and walk, which could compromise their security as anyone could sneak up on them.

User design requirements list

1. The solution should show streets where criminal activities happen in real time, as people can avoid such places and choose another street.
2. The solution should be connected to the Police database containing historical and current records of criminal activities that have taken place in the University District, in order to retrieve this information for the benefit of the user.
3. The solution should update its data in real time in order to efficiently record crime and inform the user.
4. The solution should be connected to a city mapping interface, as it is easier for people to get the information of a street on a map than using a text description.
5. The solution should have a user tracking functionality, as people would require to fix their position on the map, in case if any incident occurs to him/her.
6. The solution should show security statistics of each street clearly, as people would want to easily judge which street to walk back home on.
7. The solution should tell user details of a street, such as the crowd density, luminosity and if there are any shelters nearby, as people want to know the elements that make them feel safe or unsafe.
8. The solution should have the ability to tell the users which path will be the safest from start point to their destinations according to the time of travel, as the user would want to choose another path back home if a crime has occurred on his current path.
9. The solution should be able to record crime in audio and video format, and synchronize this data with the Police database.
10. The solution should have an easy to use interface in order to cater to all types of users (novice to excellent) of technology and to an age group between 18 and 65.

Refined Design question

Based on our research, we decided to refine our design question to get a sharper focus.

New design question: How can college students and young professors avoid dangerous street when walking home late at night in the University District?

Initial design question: How can you utilize the crowd to reduce criminal activities on the streets, when heading home late at night?

After our research and discussions, we found out that the initial question was a bit ambiguous and did not reflect our theme clearly. There was no mention of:

- The type of user group our product was focused towards (students, professionals, party goers etc).
- The locality where criminal activities take place.
- The medium used in returning home (walking, public transport, car, etc).

Group: EMPATHY

Adrian DSa

Yuan (Carrie) Wang

Abhigyan Kaustubh

Lihua (Gloria) Deng

Our current design question has been remolded according to the user research survey conducted and the personas defined for our product. It addresses the user who would be interacting with the product, the location and the medium used to return home late at night.

Group: EMPATHY

Adrian DSa

Yuan (Carrie) Wang

Abhigyan Kaustubh

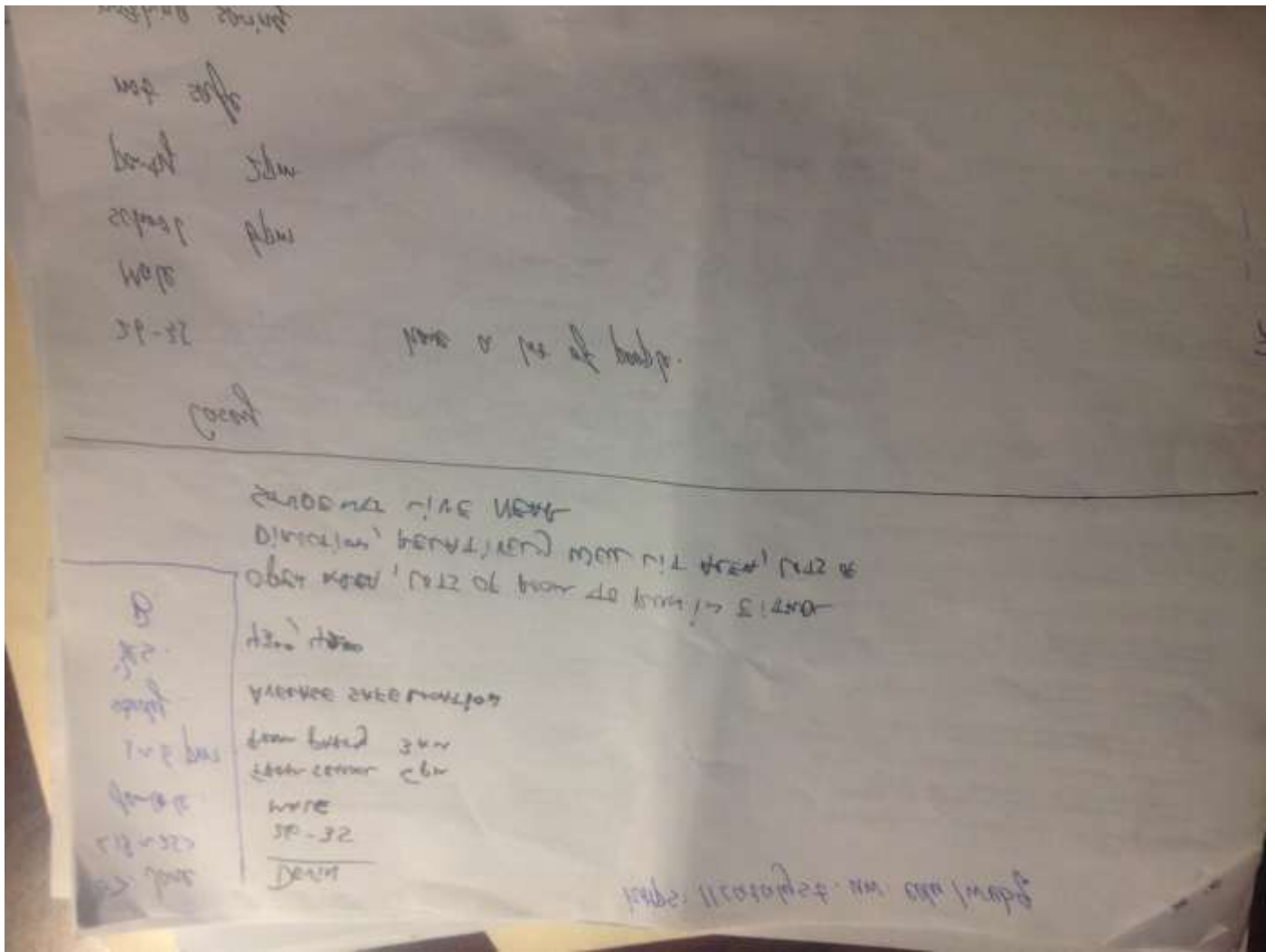
Lihua (Gloria) Deng

B. Personas (Refer the PowerPoint File)

C. Appendix

Interview Notes

Lihua (Gloria) Deng



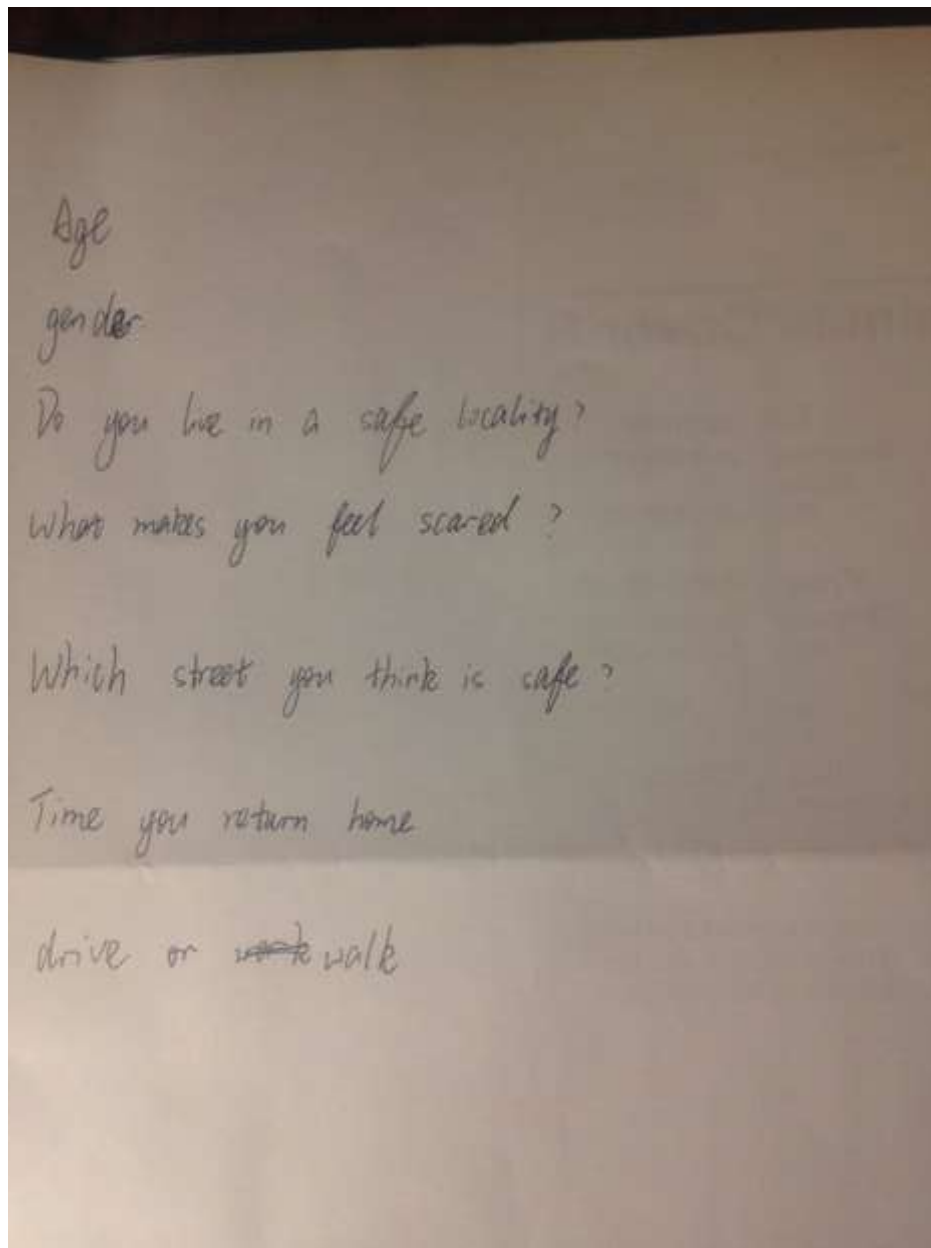
Group: EMPATHY

Adrian DSa

Yuan (Carrie) Wang

Abhigyan Kaustubh

Lihua (Gloria) Deng



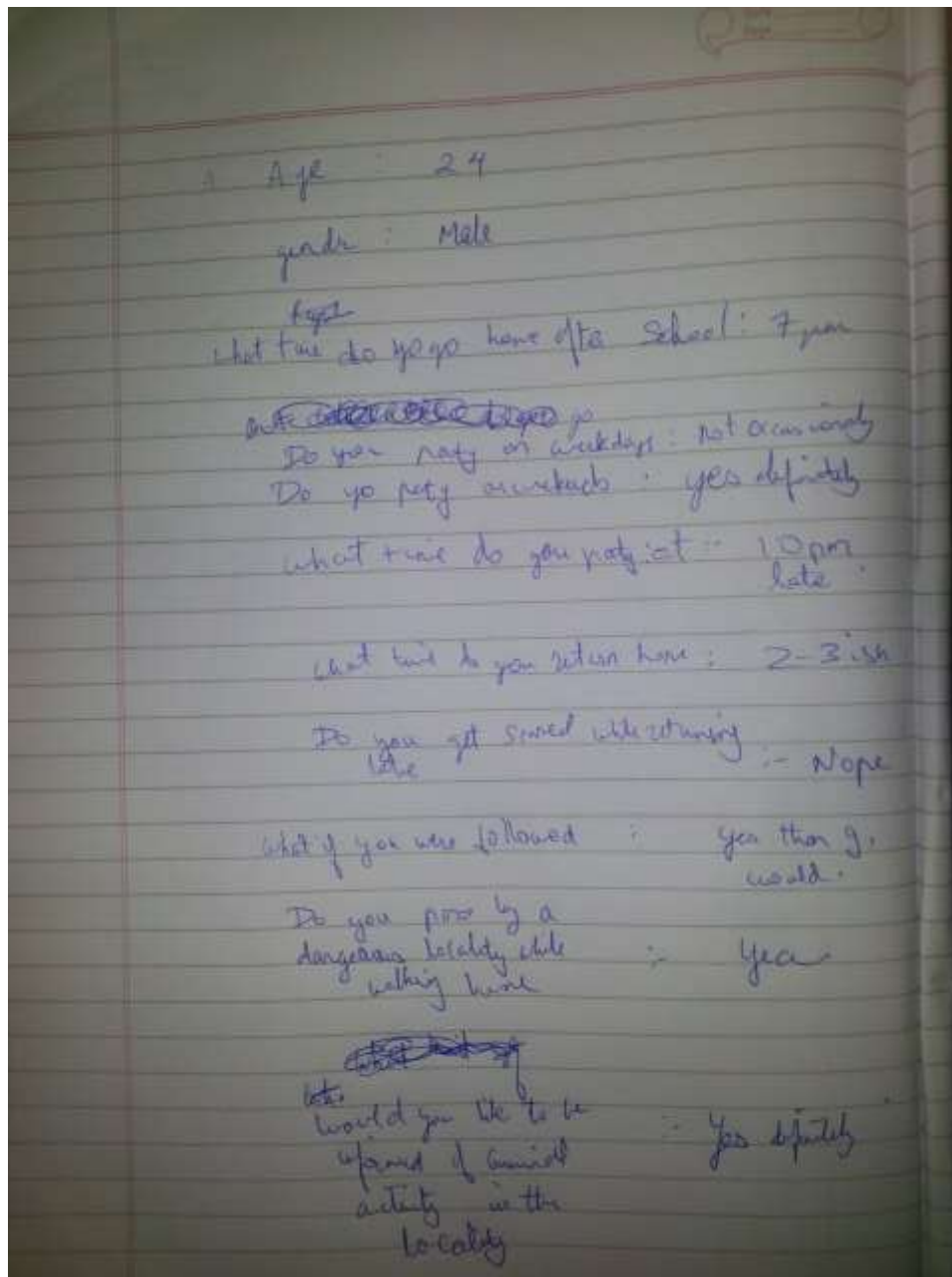
Group: EMPATHY

Adrian DSa

Yuan (Carrie) Wang

Abhigyan Kaustubh

Lihua (Gloria) Deng



Group: EMPATHY

Adrian DSa

Yuan (Carrie) Wang

Abhigyan Kaustubh

Lihua (Gloria) Deng

Date: _____
Page: _____

Age: Not gonna disclose :- between
18 - 23

Gender: female

What time do you go home
after school or : 6-7 pm
but depends.

Do you travel late : yes often

Do you party on
weekends: : yes

Do you get scared when
returning home late at
night from school/ party : yes

How would you like to
be informed of : Bga
text message
criminal activities at night maybe.

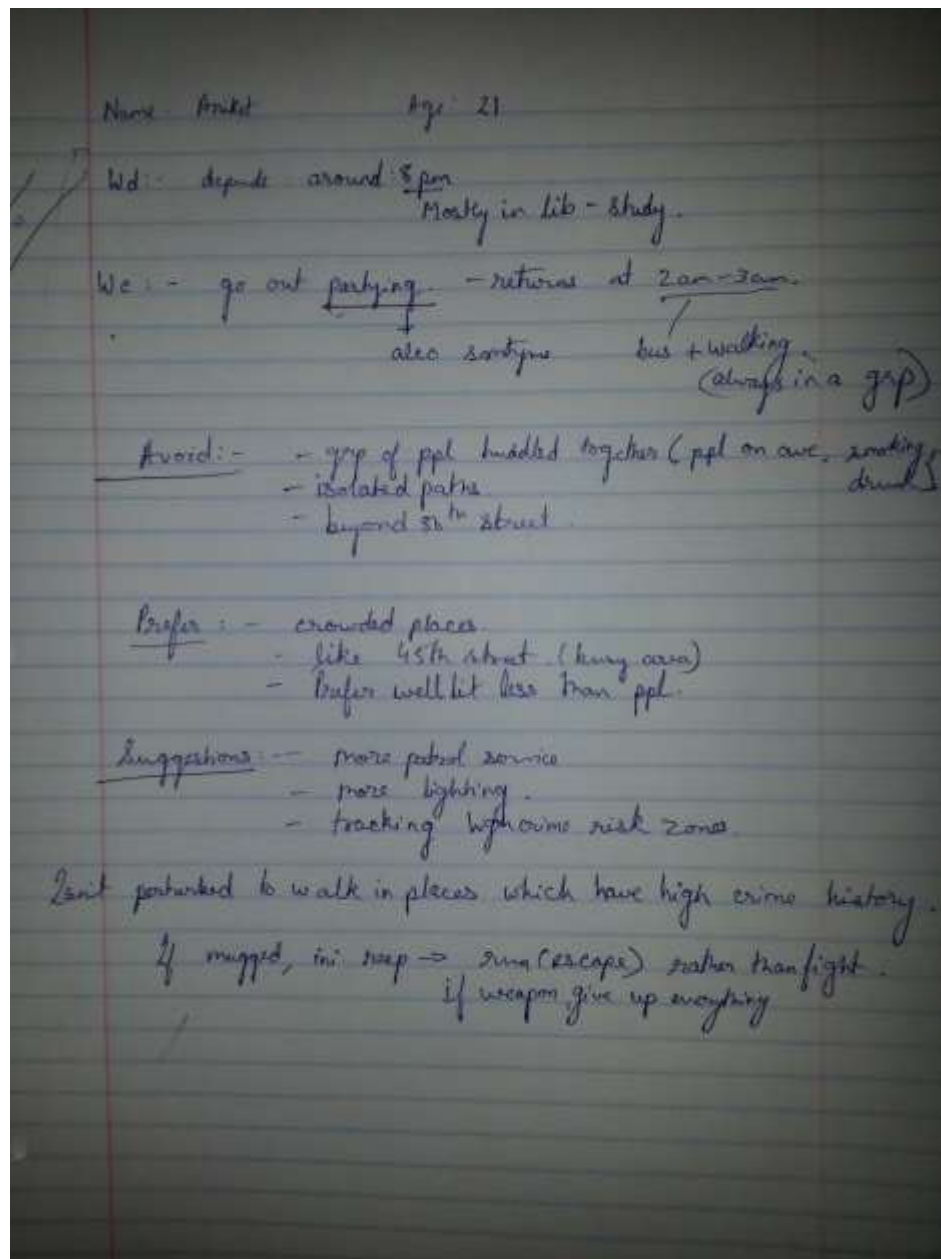
Group: EMPATHY

Adrian DSa

Yuan (Carrie) Wang

Abhigyan Kaustubh

Lihua (Gloria) Deng



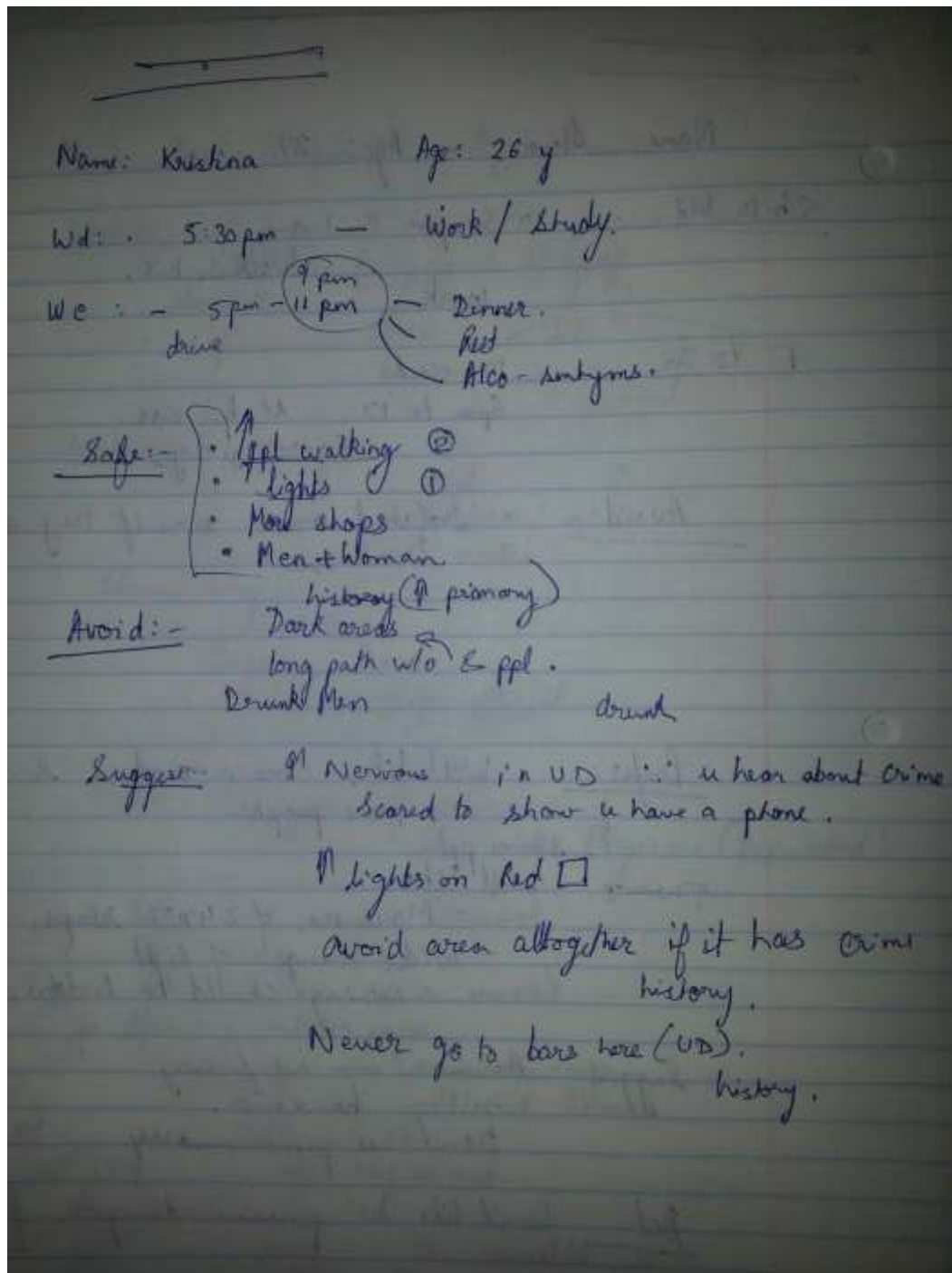
Group: EMPATHY

Adrian DSa

Yuan (Carrie) Wang

Abhigyan Kaustubh

Lihua (Gloria) Deng



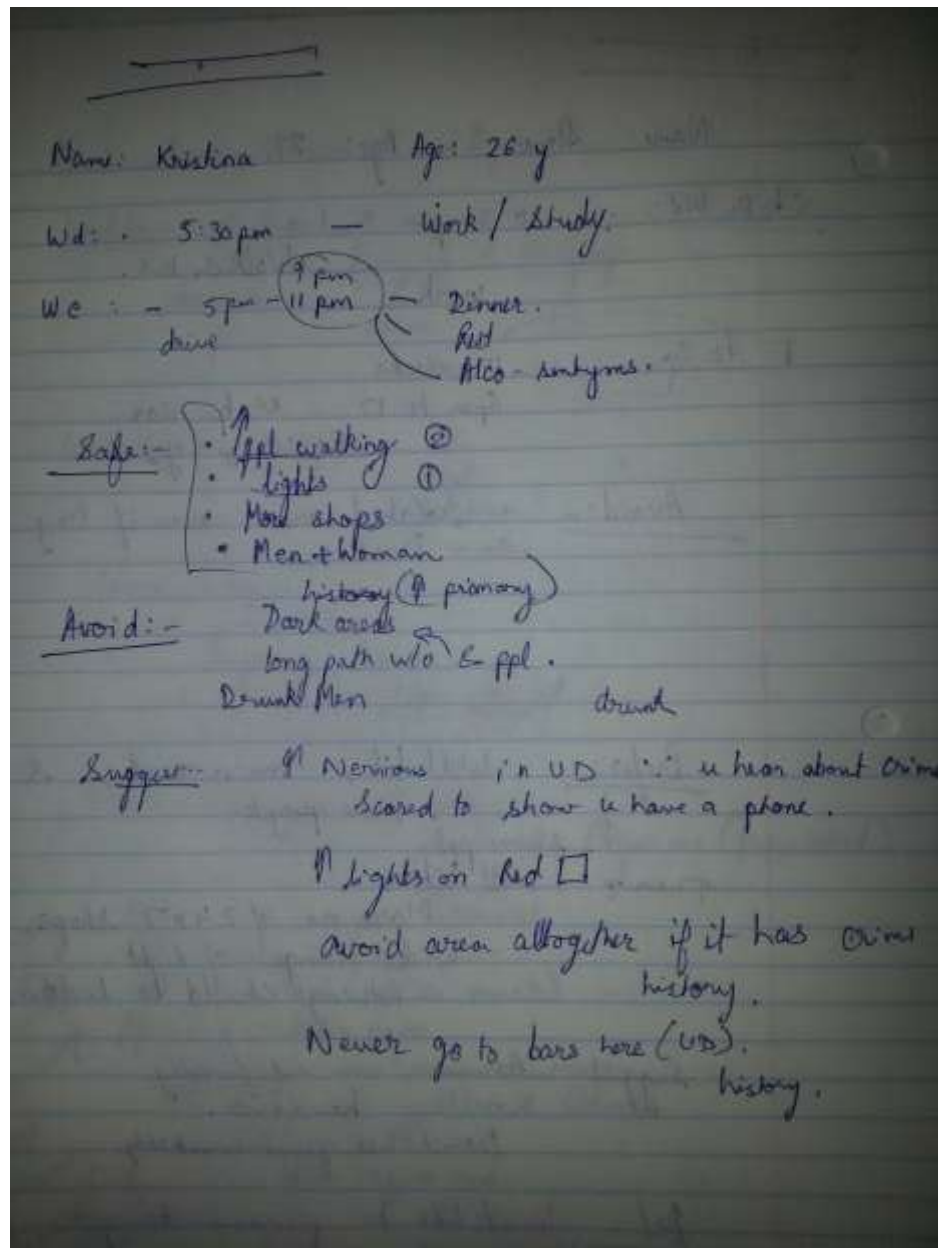
Group: EMPATHY

Adrian DSa

Yuan (Carrie) Wang

Abhigyan Kaustubh

Lihua (Gloria) Deng



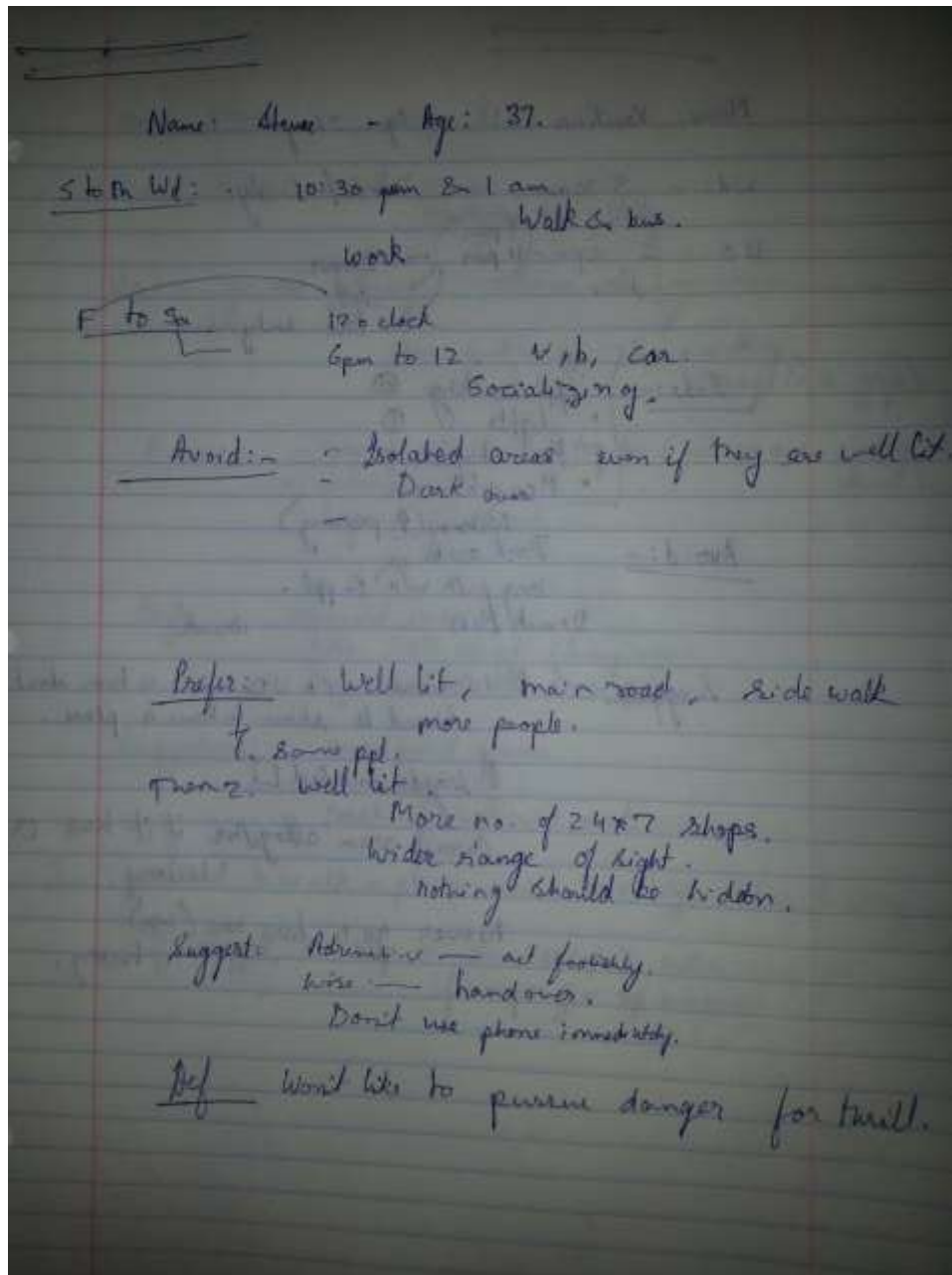
Group: EMPATHY

Adrian DSa

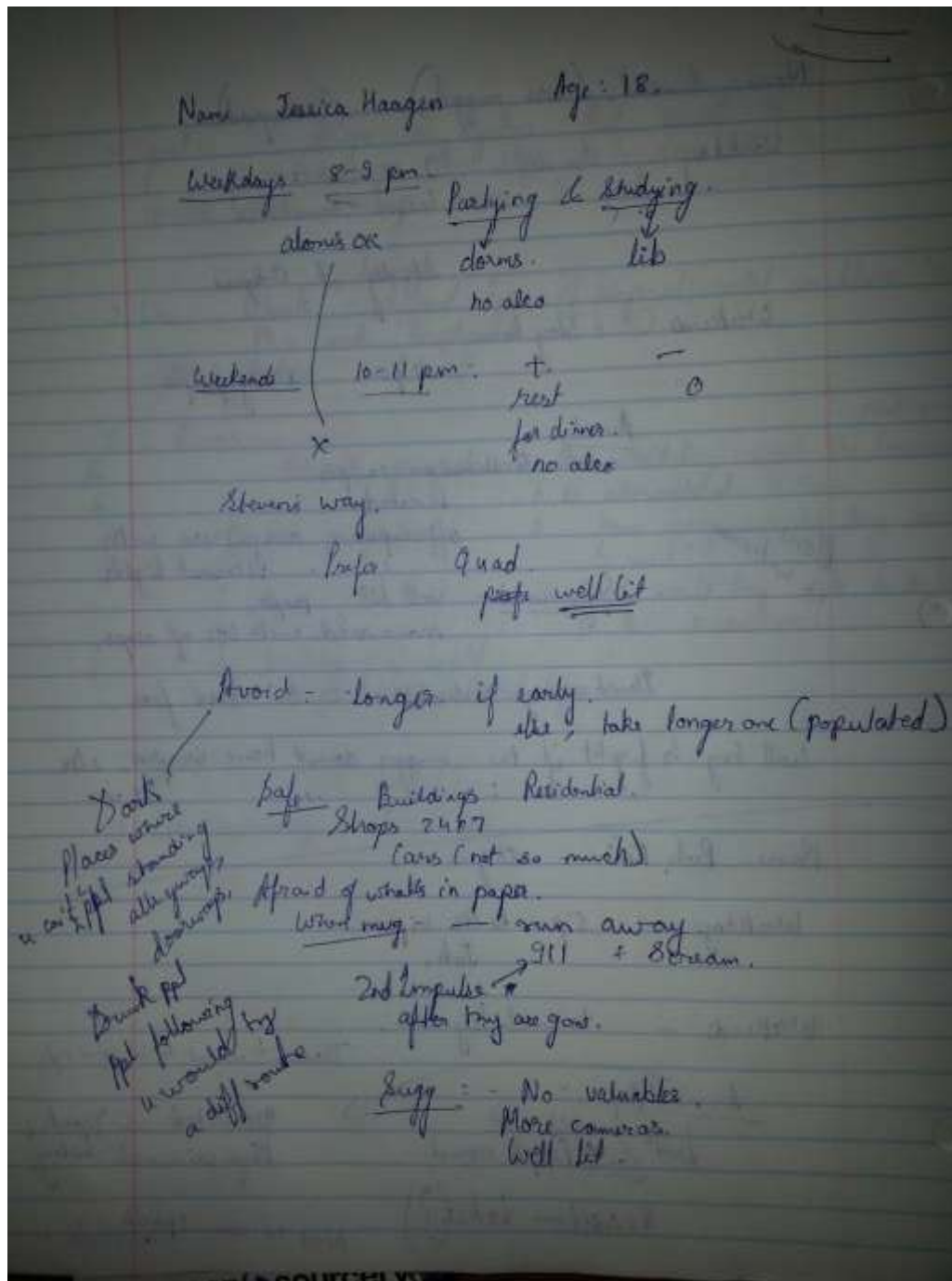
Yuan (Carrie) Wang

Abhigyan Kaustubh

Lihua (Gloria) Deng



Lihua (Gloria) Deng



Group: EMPATHY

Adrian DSa

Yuan (Carrie) Wang

Abhigyan Kaustubh

Lihua (Gloria) Deng

Name: Samuel. (was mugged) (Undergrad)
 Weekday - depends... 9-10 - class
 4am sometimes.
 Study at Odeyard.
 Weekends - stay home
 7-8 pm. study papers
 Avoid:
 some locations on campus.
 isolated.
 off campus - anywhere with
 street lights.
 Safe roads - well lit, people,
 main road with lots of shops.
 Don't carry valuables. - No other fear.
 Will try to fight if the mugger doesn't have weapon, else
 all over.
 Name: Bob Rini 56 years
 Weekdays - 5 pm to 10 pm.
 Job.
 Weekends - travel by car.
 Avoid / Prefer:
 both well lit
 + people around.
 Drivell - takes(?)
 Doesn't want to go up.
 Poorly lit & Dark.
 High criminal history.
 Not to use sports
 equipment.

Adrian DSa

Abhigyan Kaustubh

Lihua (Gloria) Deng

