CAP 6938 Research Proposal Draft #2 Rubric

This rubric will be completed by both your instructor (50%) and two peer-reviewers (50%).

Paper Author(s): ___Rajib and Sayma_____

Criteria	Description	Points Possible	Points Earned
Addressing Feedback	The authors adequately and comprehensively addressed the reviewers' feedback to significantly improve their paper. They conceptually grouped their reviews to make sense of the feedback.	20	12
Motivating the Research Topic	The authors clearly motivated the topic and defined the problem-space for the research to be conducted. They included adequate references (at least five) to support their arguments and showed the overall importance of why this work needs to be done.	5	4
Research Questions	The authors articulated the main research questions that will be addressed by the proposed research.	5	5
Literature Review	The authors synthesized the relevant bodies of literature that motivate their proposed research. They identified gaps and showed how their research served to fill these research gaps. The authors convinced the readers that their proposed research was novel and will make a significant contribution to the extant literature in this field.	10	7
Methods and Feasibility	The authors chose appropriate methods for addressing their research questions or hypotheses. They justified these methods well and gave enough descriptive detail to know what they plan to do to carry out the work. The authors updated their feasible plan for executing their study by the end of the semester. This plan was well-thought-out, not overly ambitious, and well-specified.	20	15
IRB Protocols	The research team completed their IRB CITI training, created all the necessary IRB materials, and submitted their protocol and study materials to the IRB for review. These documents depict a well-designed that is ready for launch.	20	15
Writing Quality	The proposal draft was well-written, easy-to-understand, and conformed to the old CHI two-column paper template. It was approximately 5-8 pages in length and followed the guidelines for "How to Write a CHI Paper."	20	15

Grading Scale   Total Score: ___73_____

- **90 – 100** = 5, Definitely Accept
- **80 – 89** = 4, Probably Accept
- **70 – 79** = 3, Maybe acceptable (with significant modifications)
- **60 – 69** = 2, Probably Reject
- **< 60** = Definitely Reject

This rubric should be accompanied with a 1.5-2.5 paged single-spaced, high quality, <u>anonymous</u> peer-review of this manuscript. Submit as one PDF.

Overall, this work has improved from the last draft, but there are still weaknesses that must be addressed. Please see comments on hard copy of the paper.

Addressing Feedback: The response document was difficult to read and see how you addressed specific feedback. It was also not grouped conceptually across reviewers (introducing a lot of repetition) and was too chunky to be a useful tool to revise your paper. The responses were too short and did not articulate how you revised the draft to address the reviewers' comments.

Motivating Research Topic: Your paper is still missing the logical flow as to why we should examine the use of smart home devices by AirBNB hosts. Also, you motivate the paper using the trust issue, which also seems to be your main finding. The strength of this research is its novelty, and when you frame your motivation the same as your results, you risk making the reader think that your results are not new or worthwhile. There are a number of ways you could motivate the paper more strongly. For instance, you could use a privacy slant. News reports have highlighted how AirBNB guests' privacy have been violated by the use of smart devices in the rental. Therefore, it is important to understand hosts motivation to use such devices in their homes as to reconcile these potential privacy violations. You need to think more about why this research is important.

Research Questions: These are clear but don't really seem to align with the questions you are asking in your interview. Make sure you will be able to answer them in your results.

Literature Review: While the literature review is better than it was before, It is still difficult to parse and needs to tell the bigger picture. Also, the section on AirBNB smart home is confusing because when you read it, you are not summarizing research on AirBNB smart home use. You need to do a whiteboarding session (with me) to has out the big ideas of this section, so that you can clearly frame your arguments in a way that makes sense.

Methods and Feasibility: You only conducted a semi-structured interview study. Yes, there was a pre-screening survey for eligibility, but it was not a main part of this research. So, you really should only have 1-3 sentences about the pre-

screening survey in the methods (and nowhere else). And your interview is not a follow-up. It is the main part of this research. Also, make sure your interviews are semi-structured rather than structured. If not, you are not going to get interesting enough insights to write about in your results.

IRB Protocols: Your study design is too simplistic, and as a result, it will be difficult to get this work published unless you have really interesting results to present. The interview questions are problematic and could have used a lot more thought.

Writing Quality: While the grammar and writing are fine, the ideas in the paper often do not flow logically to make a cohesive argument. Overall, the paper needs both more depth of ideas and a higher-level synthesis of the big ideas or take-aways presented by the research.

CAP 6938 Research Proposal Draft #2 Rubric

This rubric will be completed by both your instructor (50%) and two peer-reviewers (50%).

Paper Author(s): Rajib Dey, Sayma Sultana

Criteria	Description	Points Possible	Points Earned
Addressing Feedback	The authors adequately and comprehensively addressed the reviewers' feedback to significantly improve their paper. They conceptually grouped their reviews to make sense of the feedback.	20	13
Motivating the Research Topic	The authors clearly motivated the topic and defined the problem-space for the research to be conducted. They included adequate references (at least five) to support their arguments and showed the overall importance of why this work needs to be done.	5	5
Research Questions	The authors articulated the main research questions that will be addressed by the proposed research.	5	4
Literature Review	The authors synthesized the relevant bodies of literature that motivate their proposed research. They identified gaps and showed how their research served to fill these research gaps. The authors convinced the readers that their proposed research was novel and will make a significant contribution to the extant literature in this field.	10	7
Methods and Feasibility	The authors chose appropriate methods for addressing their research questions or hypotheses. They justified these methods well and gave enough descriptive detail to know what they plan to do to carry out the work. The authors updated their feasible plan for executing their study by the end of the semester. This plan was well-thought-out, not overly ambitious, and well-specified.	20	17
IRB Protocols	The research team completed their IRB CITI training, created all the necessary IRB materials, and submitted their protocol and study materials to the IRB for review. These documents depict a well-designed that is ready for launch.	20	18
Writing Quality	The proposal draft was well-written, easy-to-understand, and conformed to the old CHI two-column paper template. It was approximately 5-8 pages in length and followed the guidelines for "How to Write a CHI Paper."	20	14

Grading Scale   Total Score: 78

- **90 – 100** = 5, Definitely Accept
- **80 – 89** = 4, Probably Accept
- **70 – 79** = 3, Maybe acceptable (with significant modifications)
- **60 – 69** = 2, Probably Reject
- **< 60** = Definitely Reject

Rajib Dey and Sayma Sultana – Sharing Smart Home Devices: From the perspective of AirBnB hosts

Anonymous Peer Review

Summary

This paper seeks to gain an understanding of how AirBnB hosts are using smart home devices in their rental properties, to begin forming requirements for smart home devices that provide adequate shared access options for both hosts and guests in the AirBnB economy.

Strengths

- The research motivation was well thought out, framed by an explanation of shared economy and smart home devices, the problems of sharing smart home devices with strangers, and the need to understand how AirBnB hosts currently use these devices.
- The literature review gives the reader a good account of the current problems with smart home devices to then contextualize the trust issues with AirBnB homes that use these devices.
- Methods have adequate justification and had a reasonable feasibility to be completed within the next few weeks

Introduction

- The introduction presents the core concepts of sharing economies and smart home devices with well-thought out explanations before explaining the problem space of needing to know how AirBnB hosts use these devices in their properties. However, the 'sharing economy' needs to be defined in the introduction, not in the abstract. The abstract does not count as part of the core of your manuscript, and all initial definitions should occur in the introduction
- The explanation of the problem space should probably include the lack of usable shared access features, as a way to lead into the issue of needing to know what features AirBnB hosts would need in terms of shared access.

Related Work

- In the first section, you mention that, "the consumer landscape for both the financial and the personal experience has changed considerably". This is very vague, and I would have liked to see some literature to explain this in further detail, as I'm not quite sure what it means in terms of hosts using smart home devices
- In describing Zeng et. al's work, you write that it was found that smart home devices lack privacy features but then also say that most commercially available smart home devices provide elementary controls for security and privacy. This seems contradictory and one of these statements should be removed to accurately reflect the citation.
- When describing the relationships between parties for sharing access to IoT devices, you cite multiple articles consecutively without describing the work in much detail. This seems reductive. If you need to cite these works to provide more context to the problem space,

you should describe them in more detail within your literature review, so that they don't seem thrown in to simply lend your argument legitimacy.

Method

- You don't need separate sections for detailing recruitment and the pre-screening survey. Recruitment details should be added in the first section of your methods, and the description of the pre-screening survey does not need to be as detailed as it currently is, if its main purpose is to determine eligible participants for your interviews.
- Your section on data analysis needs to be revised. It should only describe the means by which you will be collecting, storing, and deriving meaning from your data.

Recommendations

- Ensure all core concepts are defined in your introduction and define the problem space further before establishing your research questions. The questions should follow logically to answer the problem you present immediately before them.
- Revise your literature review to describe cited work in more detail where necessary
- Revise grammatical and writing errors. The Related Work section has several of these, making it very difficult to understand. There is also an unfinished sentence in the recruitment section under Methods.
- Transfer the demographic questions in your interview script to the survey. Too many busy-work questions early in the interview can cause the participant to lose interest

CAP 6938 Research Proposal Draft #2 Rubric

Paper Author(s): Rajib Dey & Sayma Sultana

Criteria	Description	Points Possible	Points Earned
Addressing Feedback	The authors adequately and comprehensively addressed the reviewers' feedback to significantly improve their paper. They conceptually grouped their reviews to make sense of the feedback.	20	15
Motivating the Research Topic	The authors clearly motivated the topic and defined the problem-space for the research to be conducted. They included adequate references (at least five) to support their arguments and showed the overall importance of why this work needs to be done.	5	3
Research Questions	The authors articulated the main research questions that will be addressed by the proposed research.	5	5
Literature Review	The authors synthesized the relevant bodies of literature that motivate their proposed research. They identified gaps and showed how their research served to fill these research gaps. The authors convinced the readers that their proposed research was novel and will make a significant contribution to the extant literature in this field.	10	8
Methods and Feasibility	The authors chose appropriate methods for addressing their research questions or hypotheses. They justified these methods well and gave enough descriptive detail to know what they plan to do to carry out the work. The authors updated their feasible plan for executing their study by the end of the semester. This plan was well-thought-out, not overly ambitious, and well-specified.	20	18
IRB Protocols	The research team completed their IRB CITI training, created all the necessary IRB materials, and submitted their protocol and study materials to the IRB for review. These documents depict a well-designed that is ready for launch.	20	20 (do not need IRB approval)
Writing Quality	The proposal draft was well-written, easy-to-understand, and conformed to the old CHI two-column paper template. It was approximately 5-8 pages in length and followed the guidelines for "How to Write a CHI Paper."	20	10

Grading Scale

Total Score: 79

- **90 – 100** = 5, Definitely Accept
- **80 – 89** = 4, Probably Accept
- **70 – 79** = 3, Maybe acceptable (with significant modifications)
- **60 – 69** = 2, Probably Reject
- **< 60** = Definitely Reject

CAP 6938 Research Proposal Draft #2 Review

Summary

The authors proposed a study on a deeper understanding of how Airbnb hosts share the smart home devices (e.g., Google Home, Alexa, Smart Lock, etc.) The authors articulated that past research examined only how smart devices are used and shared in a close trusted circle between family members, roommates, etc. but not outside of that circle (in this case between Airbnb hosts and guests). Since the study is still in a proposal stage, there are no key findings for the authors to report as of yet. However, the authors specified that the main contribution of the paper is providing a better understanding of the status quo of smart home devices use at Airbnb and design recommendations to developers and manufacturers of smart home devices.

Strengths

I found that the proposed research is novel as it builds upon the past research and investigates more situations/experiences where smart home devices are being used. The proposed research consists of two stages, such as a pre-screening interview and follow-up interview: the methods were clear and understandable, and, more importantly, these methods were justified by the authors.

Major comments

Even though the study is novel and consists of justified straightforward procedures, there are major flaws that cannot be ignored. I situated those flaws within three main cumulative categories, such as writing quality, addressing feedback, and justification.

- **Writing Quality:** I found that sometimes it was difficult to read the paper because the authors either included the specific terminology without giving additional explanations or used high-concept wording.
    - The authors often use the terminology, such as "sharing economy" or "status quo". Rephrasing the sentences that include this specific terminology will contribute to the overall better understating of the research topic.
    - Some parts of the paper either too repetitive or not necessary at all (adding no value/new knowledge for the reader). For example, in the introduction, the authors conclude "According to International Data Corporation (IDC), almost 833 million smart home devices have been shipped globally just this year alone", these details do not follow logically from the previous sentences and do not add any value.
    - In the introduction, the contributions are somewhat abstractive/vague and do not provide concrete information. Using the high-concept words, such as "we will synthesize" and "we will know the requirements of the Airbnb hosts", make it hard to understand the made contributions.
    - Some parts of the paper need to be moved to other sections. For example, in the method, the authors continue to explain the related work and the contributions. The method should describe the experiment, procedures and not the related work. Furthermore, the recruitment and ethics sections are more related to the feasibility plan section.
    - The data analysis section does not describe the analysis, it describes the study procedures. The authors should find the related work that was done previously and look at how the researchers qualitatively analyzed the data to include it in the data analysis section.
    - The Sharing Economy and Airbnb subsection looks more like an introduction than the part of the related work section. Additionally, the contribution here does not logically follow the paragraph. The authors should thoroughly revise their contributions and logically connect it to the work done in the field.

- **Addressing Feedback:** The response doc lacked the structure as it was hard to understand whether the whole grouped feedback was addressed or only part of. Additionally, some of the feedback comments were abandoned or left blank.
  - The authors should have a more structured response document, address each reviewer comment and make it clear which reviewer feedback is addressed. Make it consistent.
- **Justification**
  - Sometimes the authors justify the study by saying that "we need to know the perspective of hosts" (in the abstract) or "but we need to understand how it plays out outside of the trusted circle", this does not give the reader enough justification as why the research needs not be done in the first place.

Minor comments

Additionally, there are minor flaws that can be easily fixed and improve the overall quality of the paper:

- Some of the references did not match the mentioned numbers in the paper. Format the references and order them alphabetically.
- In the last paragraph of the Smart Home Access Control and Privacy, provide citations on which research work was done on user and sharing home devices inside a closed trusted circle.
- 3 days is not enough for analysis (do not forget about transcribing the data).
- Create a distributed flyer to gain more participants.
- Even though it might be too late to talk about the recruitment, I would suggest recruiting only those Airbnb hosts who include in the housing listing the use of smart home devices (e.g., Smart Lock/Box). That could give the authors a higher probability to recruit the studied population.

Overview

Considering all the above-mentioned strengths and flaws, I would recommend this paper to be accepted with significant modifications. The main issues that should be solved are the writing quality, addressing feedback, and justification. If the authors will thoroughly rewrite some of the sections trying to make it more like a story, that would significantly improve the paper quality and make it more enjoyable to read the paper. Additionally, the authors should thoroughly check the structure of the paper to make sure the text is relevant to the section.

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Paper Author(s): __Rajib and Sayma_____

Criteria	Description	Points Possible	Points Earned
Addressing Feedback	The authors adequately and comprehensively addressed the reviewers' feedback to significantly improve their paper. They conceptually grouped their reviews to make sense of the feedback.	20	2
Motivating the Research Topic	The authors clearly motivated the topic and defined the problem-space for the research to be conducted. They included adequate references (at least five) to support their arguments and showed the overall importance of why this work needs to be done.	5	3
Research Questions	The authors articulated the main research questions that will be addressed by the proposed research.	5	**5**
Literature Review	The authors synthesized the relevant bodies of literature that motivate their proposed research. They identified gaps and showed how their research served to fill these research gaps. The authors convinced the readers that their proposed research was novel and will make a significant contribution to the extant literature in this field.	10	**3**
Methods and Feasibility	The authors chose appropriate methods for addressing their research questions or hypotheses. They justified these methods well and gave enough descriptive detail to know what they plan to do to carry out the work. The authors updated their feasible plan for executing their study by the end of the semester. This plan was well-thought-out, not overly ambitious, and well-specified.	20	**10**
IRB Protocols	The research team completed their IRB CITI training, created all the necessary IRB materials, and submitted their protocol and study materials to the IRB for review. These documents depict a well-designed that is ready for launch.	20	**5**
Writing Quality	The proposal draft was well-written, easy-to-understand, and conformed to the old CHI two-column paper template. It was approximately 5-8 pages in length and followed the guidelines for "How to Write a CHI Paper."	20	**2**

Grading Scale   Total Score: ___30____

- **90 – 100** = 5, Definitely Accept
- **80 – 89** = 4, Probably Accept
- **70 – 79** = 3, Maybe acceptable (with significant modifications)
- **60 – 69** = 2, Probably Reject
- **< 60** = Definitely Reject

This rubric should be accompanied with a 1.5-2.5 paged single-spaced, high quality, <u>anonymous</u> peer-review of this manuscript. Submit as one PDF.

Brief Summary: The authors want to perform a study where they interview AirBnB hosts to determine what features of smart home devices they need and want. The motivation for this research is a lack of features that allow sharing devices with strangers.

Reviewer Expertise: competent in smart home devices, novice in sharing economy

Overall this paper was extremely difficult to read. There are inherent flaws everywhere. I had to read every paragraph multiple times just to get a glimpse of understanding what the authors are trying to portray. The following lists the inherent flaws in order of major issues first, then minor issues, followed by simple suggestions for additional improvements that have no relation to flaws.

Major: The authors have several instances where they mention that they address the reviewer's comments in the reviewer response document, but from reading the paper it does not appear to have been addressed. For example, the first noted response is that the contribution has been made more clear and concise. I do not fully understand the contribution as it is presented in the paper. It is not clear and is extremely confusing. I recommend revisiting this area of the paper.

Major: The authors specifically state in their response document that they passed their draft through Grammarly to make sure there are no grammar mistakes. I get the impression that this did not happen as the paper has so many grammar mistakes that it is difficult to read. Several sentences do not contain complete thoughts, they just end abruptly. Several sentences have inconsistent pluralities. Several sentences have capitalized words in the middle of the sentence, making it difficult to discern if the sentence is supposed to be two sentences or if a typo made the word capitalized. There is a major disconnect for when articles should be used as many of the sentences are missing them. One of the more obvious grammar examples that should have been caught by Grammarly occurs in the last sentence of the 'Recruitment' section. The sentence just ends with "and" and there is no punctuation, making it seem unfinished. This link will help to understand how/when to use articles in English:

https://owl.purdue.edu/owl/general_writing/grammar/using_articles.html#:~:targetText=English%20has%20two%20articles%3A%20the,a%2Fan%20the%20indefi

This link will help to understand how to use consistent pluralities: https://owl.purdue.edu/owl/general_writing/grammar/count_and_noncount_nouns/plurals_articles_and_quantity_words.html

Major: The paper doesn't flow. The research questions come out of nowhere. The paper should flow into the research questions in a way that shows where the questions are coming from.

Major: There are several sentences throughout the paper that contain incomplete thoughts. This makes it difficult for the readers to follow. Consider doing a pass over the paper and fully fill in the thoughts to their completion.

Major: Several reviewer comments from the previous review are left out of the response document and therefore not addressed in the paper or the response document. Some of these reviewer comments would result in a desk reject when submitting to CHI as well as are listed in Wobbrock's paper for writing for CHI, so they should not be taken lightly. One specific example is that the references section is not in alphabetical order by author last name.

Major: Another item that did not get mentioned from the previous review is that the acronym, "IoT" is used repeatedly and never defined. As it is jargon related to a specific field or area of expertise, it is not well known enough to be used without definition. This acronym can also mean other things as it could mean, "Indiana Office of Technology" as per https://www.in.gov/iot/. Always define acronyms and jargon the first time they are used in order to assist your readers. If a reader has to look up a few words, they're going to stop reading your paper as the task becomes tedious.

Major: The hypotheses are missing from the introduction. This makes it difficult to discern what the research is trying to find out.

Major: The related work uses bait and switch when it specifies that little research has shown the economic impact of AirBnB on sharing economies. Is this paper about economic impact of such things? It is not mentioned beyond this declaration. Consider rephrasing to support your arguments better.

Major: Kostianinen et al. is mentioned in the 'Smart Home Access control and Privacy' section, but it doesn't seem to fit without more details about why it fits in this paragraph.

Major: There is inconsist word choice throughout the paper. Early on in the paper there is mention of hosts and guests. Later it mentions users, but does not make it clear as to whether the users are hosts or guests or both. It helps the reader in clarity if consistent word choice is used throughout the paper. Additionally there are parts that mention interview, follow-up session, and follow-up interview. Are all three of these terms the same? They seem to be used interchangeably. consider choosing one term and stick to it.

Major: It is mentioned in the related work that something is "perceived as being burdensome" but does not specify how or why it is considered to be such. Nobody is going to look up the cited paper, so you need to specify this information to assist the readers in understanding the context.

Major: There is single sentence paragraph in the related work that does not seem to fit with the related content around it without further elaboration. I recommend elaborating more on this to make it become a true paragraph.

Major: The citation in the last paragraph of the related works (Rotgers) is not consistent spelling with the citation listed in the references (Rogers). This can make the authors lose credibility, so be careful to double check spelling when inserting a citation. Additionally, Edwards is the first name in the citation, so it should be cited as "Edwards et al."

Major: The paper mentions asking potential participants which smart devices they use in the screening survey, then asking them the same question in the interview. The provided questionnaires reflect this redundancy. Consider just asking the question of participants once and in the interview you can ask for more details about their usage without irritating the participant by making them answer the same question repeatedly.

Major: The 'Data Analysis' section does not contain any information about the data analysis. How will you code the data? What statistical analyses methods do you anticipate using?

Minor: The order of the documents is not in the correct order as specified by Pam's instructions.

Minor: There is no indication of which reviewer is Pam in the reviewer response document.

Minor: The introduction uses gender specific terms such as, "he" and "his". Consider using gender neutral terms such as "they" in order to reduce the chance of offending your readers and make the paper more inclusive of people that may be using the devices mentioned in those sentences.

Minor: Several times it is mentioned that this research shows something. However, the text that precedes this bold statement does not provide enough details to back up the statement.

Minor: The related work mentions that manufacturers are not helping the cause of using a smart home device in a multi-user setting. This is a bold statement, is there a citation to back up this claim?

Minor: Several paragraphs in different sections appear to say the same thing in such a way that it is noticeable. It makes the reader feel like they are listening to a broken record. It is best to have the paper flow and the sections corroborate each other rather than repeat each other.

Minor: The caption for the table should be centered under the table.

Minor: The first part of the 'Data Analysis' section seems like it is in the wrong location. It seems to fit better in the 'Survey' section.

Minor: There is a suggested section from reviewer 5 in the response document that is listed, but no response is created for it. Additionally it is not addressed in the paper, so it at least warrants a response, even if the response is that you choose not to implement the suggestion.

Minor: Even though the IRB determined the study to be exempt from needing IRB approval, the IRB protocol that was used to determine this was not provided, so it is impossible to determine if all IRB protocols were followed, if all necessary documents were submitted, and whether the authors completed CITI training.

Suggestion: Question 4 in the screening survey seems unnecessary as it is redundant with question 5 that has a 'None' option. I recommend removing question 4. Removal of this question will also add clarity as the preceding sentence about looking to question 5 for examples can be removed with it.

Suggestion: The goodbye in question 6 and question 7 can seem a little offensive to some people. Consider changing it to more pleasant word choice similar to, "Have a nice day!"