AI-Powered Mobile Assistive Technology Apps

# Mobile App: MapinHood

This is a personalized pedestrian navigation app for the city of Toronto.

Note: MapInHood requires participation as a pedestrian in the community. You may use it while completing your daily activities in the community such as walking your dog or running errands. Please follow social distancing rules when using this app.

# Part 1: Introduction

## Setting up the app

* Go to the App store or Google Play and install [Mapinhood](https://mapinhood.com/) on your mobile device
* Go to Menu, Settings, tutorial for a basic overview of the app

## Try out the app

## Go to the Menu, Map display and tag items under the four categories: amenities, points of interest, hazards, path features

## We suggest 3 ways of using this app:

## Navigation a novel route with chosen tags

## Navigation a novel route while adding tags and audio notes

## Navigation a previous route using personalized tags and audio notes to provide support

## We suggest completing a few outings in your community. You may choose a variety of methods or just use one.

## Think about the app

* Complete the worksheet below as you complete the tasks

## Support for the app

* If you have any issues or questions regarding this activity, contact We Count research assistant, Ali Kazmi at [**akazmi@faculty.ocadu.ca**](mailto:akazmi@faculty.ocadu.ca)

## Worksheet

### App Tasks

The following table has two columns. The Task column includes the three suggested methods of using the app . The

Details of your Walk column has space for you to briefly document the specific details of your walking route and the tags

used. Complete two or more outings of your choice. As you use the app, think about where in the journey AI is used and

how data is handled and collected.

| **Task** | **Details of walk (i.e. tags added/added, destination)** | **Task completed** |
| --- | --- | --- |
| **Navigation with chosen Tags** | *Example: Went for a walk to the grocery store in the evening.*  *Used light map style. Tagged bus stops, stop signs, pedestrian*  *crossings intersections.* |  |
| **Navigation with chosen Tags** |  |  |
| **Navigation with chosen Tags** |  |  |
| **Navigation a novel route while adding tags and audio notes** |  |  |
| **Navigation a novel route while adding tags and audio notes** |  | ☐ |
| **Navigation a novel route while adding tags and audio notes** |  |  |
| **Navigation a previous route using personalized tags and audio notes** |  |  |
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### App Questions

Think about how AI and data is used in this app. You may use the following table of 10 questions to guide and record your reflections. Consider as many questions as you wish.

| **Reflecting on the App** |
| --- |
| Does the app function as intended? |
| Are there any unintended benefits in using this app? |
| Would this app benefit those outside the intended market? |
| What type of user data and information is collected to be able to use this app? Do you share data as you use this app? |
| Are users able to make changes to the app or provide feedback to the developers? |
| Do you feel the use of AI and data collected in this app improves the independence and quality of life for persons with disabilities? |
| Do you feel the use of AI and data collected is necessary? |
| Are there any ethical and fairness concerns with how AI or data is being used in this app? |
| Does the use of AI and data collected in these and other apps have a negative impact on persons with disabilities or hamper efforts to inclusion? |
| Do you have any other comments on the impacts of AI and data collected? |

# **Part 2: Exploration of Artificial Intelligence through Assistive Technologies**

## **Short Answer Questions**

Based on your experience with the app and activity, please answer the questions below.

1. How can these apps improve the quality of life for people with disabilities and support independent living?
2. How would this impact society in the way that we live, work, interact with people? How would it promote or detract from values inclusion and equality?
3. What are the risks and benefits that this type of technology would have on society and excluded groups? Are the apps “fair” in their collection of information and payment structures or are they exploitative? What are good approaches for AI and AT Apps?
4. Does the AI/AT meet diverse needs of the community it was designed for? Is it biased in its understanding of the target community and its needs?

### **Addressing Impacts**

From the CBC podcast: “*Science and technology has progressed faster than policy, and the ability for humans to keep up with ramifications. There are risks involved but we have to mitigate them as we develop this technology*.” says Roger Melko.

1. What role do governments, organizations, and citizens have in understanding these ramifications and contributing to risk mitigation policies?