

Introduction

Title of Research

Natural Language Descriptions of Activities of Daily Living

Invitation

You are being invited to take part in a research study. Before you decide to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

Participant Information

What is the purpose of the study?

The aim of this study is to determine how people describe Activities of Daily Living (ADLs) using natural language. The value of this is to enable development of a Natural Language Processing (NLP) pipeline targeted towards extracting mentions of ADLs, which can improve the effectiveness of activity recognition systems (particularly those based on machine learning) by allowing the user to self-annotate data over time.

If you agree to participate, you will be asked to answer questions in three categories, each designed to capture:

1. Free-form description of your daily / periodic activities;
2. Descriptions of specifically chosen (presented in the survey) daily activities;
3. Answers to questions about your activities, if you were asked by a virtual in-home assistant.

Why have I been chosen?

Any adult who knows English as a first or second language is invited to participate in this research.

Do I have to take part?

It is up to you to decide whether or not to take part. If you decide to take part, you are still free to withdraw at any time and without giving a reason.

What will happen to me if I take part?

If you agree to take part, you will be asked to complete a survey answering questions about Activities of Daily Living (ADLs) (e.g. common, everyday activities that happen at home), which will take around 10-15 minutes of your time to complete.

Will my taking part in this study be kept confidential?

Your response to this survey is anonymous. Any information collected about you during the course of the research will be kept strictly confidential. You are requested not to provide any personally identifiable information in your responses to the survey (e.g. do not provide specific locations or names), however, should you inadvertently do so, your responses will be edited or discarded to ensure information that may personally identify you is not retained.

We will ask you to answer some basic demographic questions, so that we can monitor the balance of our responses.

What will happen to the results of the research study?

The data gathered from this study will be used to enable a conversational agent (e.g. a 'chatbot') to more reliably detect and extract descriptions of everyday activities / ADLs. The resulting dataset will be published into the public domain, e.g. in an online dataset library. It also be accompanied by a publication(s) in a scientific conference or journal. As your responses are anonymous, we will not be publishing any of your personal information.

Who is organising and funding the research?

This research is being organised by Ronnie Smith (ras35@hw.ac.uk) and Mauro Dragone (m.dragone@hw.ac.uk).

This research is supported by the Engineering and Physical Sciences Research Council (grant EP/L016834/1), as part of the Centre for Doctoral Training in Robotics and Autonomous Systems at Heriot-Watt University and The University of Edinburgh

Who has reviewed the study?

This research has been reviewed by the Ethics Committee in the School of Engineering & Physical Sciences, project number 1091.

Contact for Further Information

If you have any questions about this study, please contact Ronnie Smith (ras35@hw.ac.uk) or Mauro Dragone (m.dragone@hw.ac.uk).

If you would like to find out more about what Heriot-Watt University (the data controller) does with your personal data and your rights under privacy law, please read our information for participants in academic research projects (available at <https://www.hw.ac.uk/uk/services/docs/information-governance/PrivacyNoticeResearch-V4Finalversion.pdf>), contact our Data Protection Officer, by post at Data Protection Officer, Heriot-Watt University, Edinburgh, Scotland, UK, EH14 4AS, or by email at dataprotection@hw.ac.uk.

Compensation

Unfortunately, we are not able to compensate participants on this occasion. If you choose to participate, your responses are very much appreciated.

Informed Consent

Please confirm that you have read and understood the information presented below, and that you agree to participate in the study.

1. I have had the opportunity to consider the information presented above, to ask questions and that these have been answered satisfactorily.
2. I understand that any of the information collected may be used in the dissemination of results of the project and will remain anonymous.
3. I agree that my responses to this survey may be analysed for research purposes, such as in the analysis of how Activities of Daily Living (ADLs) are described using natural language. This data will be analysed only by members of the research team in the present study and possible extensions of it.
4. I agree to take part in this study.

Do you agree to the above terms?

- Yes
- No

Demographics

Please answer the follow demographic questions, so that we can monitor the balance of our responses.

What is your age bracket?

- Under 18
- 18 - 24
- 25 - 34
- 35 - 44
- 45 - 54
- 55 - 64
- 65 - 74
- 75 - 84
- 85 or older

Which of the following most accurately describes you?

- Woman
- Man
- Non-binary
- Prefer not to disclose
- Let me type...

What is your ethnic group?

Overview

This survey is in three sections, designed to capture:

1. Free-form description of your daily / periodic activities;
2. Descriptions of specifically chosen daily activities, and;
3. How you would answer certain questions about your activities, if asked by a virtual assistant.

Please click the arrow to continue to the first section of questions.

Section 1

Section 1: Your Activities

In this section, you will use your own words to describe activities that you perform in your own home.

First, please start by describing an overview of your daily routine while at home. You do not need to describe activities that take place outside your home.

As an example of the appropriate level of detail: "...after I eat breakfast, I quickly put away the shopping, before heading out to work...". A few paragraphs should be sufficient.

Thinking about things that you might not do every day, but do a few times a week / month, please use this space to freely list other activities that you do around the home.

Please separate individual activities with a new line.

Section 2

Section 2: Specific Activities

In this section, you are asked to consider labels for specific activities, and are asked to describe that same activity in your own language.

Please consider these points:

- You should answer these questions as you were describing to a friend what you are doing.
- You should use language that is natural to YOU, e.g. if the label is "preparing dinner" and you would normally say "I'm making dinner" then that is what you should write.
- Please provide as many variations of responses as you like, separate responses with a new line.

Activity: "relaxing"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "working"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "studying"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "sleeping"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "leaving the house "

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "bathing"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "cooking"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "preparing drink"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "eating" (breakfast/lunch/dinner/supper)

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "snacking"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "watching TV"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "using computer"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "using smartphone"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "using internet"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "washing dishes"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "showering"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "reading"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "laundry"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "shaving"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "brushing teeth"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "talking on phone"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "listening to music"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "cleaning" (your home)

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "conversing"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "hosting guests"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "getting dressed"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "taking medication"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "tidying up"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "toileting" (using the toilet)

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "exercising"

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "drinking" (e.g. water, coffee, tea, etc.)

Think specifically about what this activity means for you. How would you describe it to a friend?

Activity: "hobby" (e.g. knitting, playing cards, painting, jigsaw, etc.)

Think specifically about what this activity means for you. How would you describe it to a friend?

Section 3

Section 3: Question / Answer

In this section, you will be asked questions about specific activities.

Imagine that you have a smart home, which monitors your activities in real-time, so that it can provide you with the most pertinent assistance at any given time. For example, by being able to detect that you have been "cooking", it is possible to autonomously deploy your robot vacuum cleaner to the kitchen to clean up after you.

To help your smart home learn more about your activities, and to improve its ability to reliably detect them, it will at times ask you questions (e.g. through a 'virtual assistant' or 'smart speaker') about what you are / have been doing.

The questions in this section are presented in the form of such questions. Please provide in each instance as many variations of answers you might give to these questions.

You are relaxing on your sofa, watching television, when you are asked:

"It looks like you are currently cooking, or washing dishes. Can you confirm which is correct?"

You may provide multiple variations of responses. Separate these with a new line.

You are eating lunch at the dining table, with a television is on, when you are asked:
"I'm having trouble working out exactly what you are doing just now, but I think you are either watching TV or eating lunch? Can you confirm which is correct?"

You may provide multiple variations of responses. Separate these with a new line.

You are eating lunch at the dining table, with a television is on, when you are asked:
"I'm having trouble working out exactly what you are doing just now, but I think you are either watching TV or doing laundry? Can you confirm which is correct?"

You may provide multiple variations of responses. Separate these with a new line.

After eating lunch, you are then washing the dishes, when you are asked:
"It looks like you are now washing the dishes? Is this correct?"

You may provide multiple variations of responses. Separate these with a new line.

You are still washing dishes, ten minutes later, when you are asked:
"Are you still washing dishes, or are you now doing something else?"

You may provide multiple variations of responses. Separate these with a new line.

You are reading on the sofa, after having finished washing the dishes, when you are asked:
"Are you still washing dishes, or are you now doing something else?"

You may provide multiple variations of responses. Separate these with a new line.