

Evaluation of Requirements for Human Behaviour Modelling for Activity Recognition

Documentation

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1 General information

Project title	Evaluation of Requirements for Human Behaviour Modelling for Activity Recognition
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1.1 Objective

To identify the requirements that are important for modelling human behaviour for activity recognition.

1.2 Problem Statement

There are different requirements for modelling human behaviour for activity recognition. To avoid the subjectivity of the model designer, study participants with different background in CS were asked to identify the important requirements for three activity recognition problems.

2 Description

The study took place during the phd thesis of Kristina Yordanova. 17 study participants were asked to answer the questions concerning the importance of 18 requirements for activity recognition. Each of the requirements was evaluated according to software engineering features. The requirements and their features are formally described in the PhD thesis "Methods for Engineering Computational Causal Behaviour Models" by Kristina Yordanova. Apart from the requirements, the following data was gathered: suitable modelling formalism according to the study participant; number of comments per requirement; person information including age, degree, field of experience; indication whether the study participant understood the problem (provided by Kristina Yordanova based on the participants' answers).

2.1 Data format

The `Data/` folder contains the anonymised answers from the 17 participants for each requirement. Each of the requirements is saved in a separate csv file. The rows in the data represent the participants, while the columns represent the requirement's property that is being evaluated.

2.2 Data Collection

The data was collected by answering a questionnaire. The questionnaire consisted of open questions and Likert scale questions. An example questionnaire can be found in the file `001-Data/docs/requirementsEvaluation.pdf` In order to answer the questions, three modelling problems were considered. They are described at the beginning of the questionnaire. The questionnaire is anonymous and the data was digitalised in csv format without any person specific information.