Plan Overview

A Data Management Plan created using DMPonline

Title: VR avatars and gait parametrisation

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Template: TU Delft Data Management Plan template (2021)

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Project abstract:

The purpose of this research study is to find out whether the visualisation of the body in VR has influence on the precision with which the feet are placed and will take you approximately 20 minutes to complete. The data will be used for the paper of the bachelor end project. We will be asking you to walk a pattern in VR and fill in a questionnaire afterwards.

ID: 100687

Start date: 01-03-2022

End date: 30-06-2022

Last modified: 16-05-2023

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VR avatars and gait parametrisation

0. Administrative questions

1. Name of data management support staff consulted during the preparation of this plan.

No data steward has reviewed this document yet (although one has been contacted).

2. Date of consultation with support staff.

2022-08-22

I. Data description and collection or re-use of existing data

3. Provide a general description of the type of data you will be working with, including any re-used data:

Type of data	File format(s)	How will data be collected (for re-used data: source and terms of use)?	Purpose of processing	Storage location	Who will have access to the data
Kinematics / Motion data	.csv .mat	Data collection package (UXF) in Unity game engine, as well as Sensors embedded into robotic devices. UXF only collects data locally, and as such can be directly stored to the project storage drive.	Evaluate motor (re)learning.	Directly to project storage drive	The project research team
Questionnaires (Intrinsic motivation inventory, Cognitive load [NASA-TLX], embodiment, usability)	.csv	Within the Unity game engine (using **VRQuestionnaireToolkit** as a basis). This toolkit only collects data locally, and as such can be directly stored to the project storage drive.	Evaluate cognitive load, motivation, stress, valence, arousal, effort, usability, embodiment.	Directly to project storage drive	The project research team
Physiological data (heart rate, skin conductance, temperature, blood pressure, oxymetry, EMG)	.mat .csv	Wearable sensors.	evaluate cognitive load, motivation, stress, valence, arousal, effort.	Directly to project storage drive	The project research team
Human-robotinteraction forces.	.mat .csv	Sensors embedded into robotic devices	Evaluate participants' effort	Directly to project storage drive	The project research team
Demographics (height, age, sex, handedness, previous experiences with e.g. gait therapy and VR, time and type of sports practiced)	.csv	Questionnaire inside Unity game engine, which is part of the UXF package.	defining demographics of participant group, Evaluate correlates with other primary and secondary measurements.	Directly to project storage drive	The project research team
Inform consent forms	.pdf	Digitized consent form, paper versions will be destroyed.	Ask consent.	Separate project storage drive	Project research team

4. How much data storage will you require during the project lifetime?

- < 250 GB

II. Documentation and data quality

5. What documentation will accompany data?

- README file or other documentation explaining how data is organised
- Data dictionary explaining the variables used
- Documentation in an Electronic Lab Notebook
- Methodology of data collection

III. Storage and backup during research process

6. Where will the data (and code, if applicable) be stored and backed-up during the project lifetime?

- Project Storage at TU Delft
- Git(lab)/subversion repository at TU Delft

IV. Legal and ethical requirements, codes of conduct

7. Does your research involve human subjects or 3rd party datasets collected from human participants?

- Yes

8A. Will you work with personal data? (information about an identified or identifiable natural person)

If you are not sure which option to select, ask your Faculty Data Steward for advice. You can also check with the privacy website or contact the privacy team: privacy-tud@tudelft.nl

- Yes

8B. Will you work with any types of confidential or classified data or code as listed below? (tick all that apply)

If you are not sure which option to select, ask your Faculty Data Steward for advice.

- No, I will not work with any confidential or classified data/code

9. How will ownership of the data and intellectual property rights to the data be managed?

For projects involving commercially-sensitive research or research involving third parties, seek advice of your

***Faculty Contract Manager** when answering this question. If this is not the case, you can use the example below.*

During the active phase of research, the project leader from TU Delft will oversee the access rights to data (and other outputs), as well as any requests for access from external parties.
Code and data analysis will be made publicly available at the end of the research project.

10. Which personal data will you process? Tick all that apply

- Gender, date of birth and/or age
- Other types of personal data - please explain below
- Signed consent forms

Motion capture data. Tracked positions of feet.

11. Please list the categories of data subjects

Students and employees of the university

12. Will you be sharing personal data with individuals/organisations outside of the EEA (European Economic Area)?

- No

15. What is the legal ground for personal data processing?

- Informed consent

16. Please describe the informed consent procedure you will follow:

All study participants will be asked for their written consent for taking part in the study and for data processing before the start of the interview.

17. Where will you store the signed consent forms?

- Same storage solutions as explained in question 6

18. Does the processing of the personal data result in a high risk to the data subjects?

If the processing of the personal data results in a high risk to the data subjects, it is required to perform a Data Protection Impact Assessment (DPIA). In order to determine if there is a high risk for the data subjects, please check if any of the options below that are applicable to the processing of the personal data during your research (check all that apply).
If two or more of the options listed below apply, you will have to complete the DPIA. Please get in touch with the privacy team: privacy-tud@tudelft.nl to receive support with DPIA.
If only one of the options listed below applies, your project might need a DPIA. Please get in touch with the privacy team: privacy-tud@tudelft.nl to get advice as to whether DPIA is necessary.
If you have any additional comments, please add them in the box below.

- None of the above applies

22. What will happen with personal research data after the end of the research project?

- Anonymised or aggregated data will be shared with others

25. Will your study participants be asked for their consent for data sharing?

- Yes, in consent form - please explain below what you will do with data from participants who did not consent to data sharing

Data will not be collected or deleted if consent is withdrawn later

V. Data sharing and long-term preservation

27. Apart from personal data mentioned in question 22, will any other data be publicly shared?

- All other non-personal data (and code) produced in the project

Code will be made publicly available with an explanation such that others may continue with it.

29. How will you share research data (and code), including the one mentioned in question 22?

- All anonymised or aggregated data, and/or all other non-personal data will be uploaded to 4TU.ResearchData with public access
- I will share my data and code via git(lab)/subversion and also create a snapshot in a repository

30. How much of your data will be shared in a research data repository?

- < 100 GB

31. When will the data (or code) be shared?

- At the end of the research project

32. Under what licence will be the data/code released?

- CC BY

VI. Data management responsibilities and resources

33. Is TU Delft the lead institution for this project?

- Yes, the only institution involved

34. If you leave TU Delft (or are unavailable), who is going to be responsible for the data resulting from this project?

Dr. Ing. Laura Marchal-Crespo - l.marchalcrespo@tudelft.nl

35. What resources (for example financial and time) will be dedicated to data management and ensuring that data will be FAIR (Findable, Accessible, Interoperable, Re-usable)?

Data will not be made publicly available.