

# Planning a measurement

Preparation steps / summary



# STEP 1. PREPARATION

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2. Are there any devices, that will be used for the measurement? *if yes, write a **manual** with information about:*
  - *Which devices are used (brief info about OS, model, etc.)*
  - *Which sensors are built-in?*
  - *Which algorithms do they use?*
  - *How will I receive my ground-truth?*
  - *How to perform a measurement with those devices (with screenshots and additional info for each step)*

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  - How to perform a measurement with those devices (with screenshots and additional info for each step)
3. Which structure will the final data have? *(in which form data must be presented)*
  - Planning of research management
    - Different sources - how to combine data
  - Planning of datamanagement
    - how data will be saved
      - .csv,.pdf,... (columns; colnames; timestamp – human/unix,...)
    - How data will be processed
      - Machine learning?
    - Where will the data be stored

# Step 1. Preparation

## 4. Test subjects based on the desired data structure

- *Plan how those can be recruited*
  - *Email*
  - *Website*
  - *Friends, Family*
- *draw up the contracts on a monetary basis / raffle*
- *Number of test subjects (divers / reduce bias)*
  - *Gender*
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## 5. How and where will be the experiment carried out?

- *Plan the time period for the measurement*
  - *Long-term*
  - *Short-term*
- *Plan a place*
  - *Laboratory*
  - *In-the-wild*
  - *Outside / inside*
- *Reduce disturbances by other people,...*

## **STEP 2. PREPARATION OF THE DOCUMENTS**



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  2. *What kind of data will be gathered*
2. Creation of the data protection declaration (*see examples under <https://www.dfg.de/service/datenschutz/forschungsfoerderung/index.html>*)
  - *Using the data structure from the step 1.3. check, decide, which paragraphs must be included in the document (there are special data types, which require an additional mentioning) -> this will be first section of the document*
  - *Describe who will gather and use data (name of the university, organization, etc.) -> second section*
  - *Describe process of gathering of the data (use step 1.2. as base to write down all devices, that will be used) -> third section*
  - *Describe how data will be stored (and do not forget to mention, that every participant has right to request deletion of their data) -> fourth section*
    - *DELETION: not possible after anonymization*

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3. If needed: Create / agree to ethics committee (*see a leaflet with full description under <https://www.uni-kassel.de/hochschulverwaltung/organisation/gremien/kommissionen/zentrale-ethikkommission>*)

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6. Create a checklist for the measurement *(for a better overview):*
  - *All documents printed (ethics committee, experiments goal, manuals, data protection declaration must be given to participants for examination, signature)*
  - *All questions answered?*
  - *Devices have enough battery and storage*
  - *WiFi, Bluetooth,... switched on?*
  - *Devices are clean? Clean after usage!*
  - *Start / end of measurement per participant (Schedule, booking of place)*
  - *Device returned? Device not broken,... etc.*

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  - *Schedule a demonstration*
  - *Prepare the documents from step 2.*



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2. **Create a measurement report** *(who and when has measured, problems, etc.)*
3. **Proof the data**
  - *Is data missing?*
  - *Plot data?*
  - *Does my preprocessing work?*
  - *Format of the data?*
  - *Can I process my data?*
  - *Are the algorithms working in a proper/expected way?*
  - *Check first results*