

# Final Report: Brain Dataset

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# Overview

- 1 Dataset
- 2 Methodology
- 3 Results
- 4 Pitfalls

Description of dataset:

- Experiment setting
- Measurement of EEG and EMG data

- Data preparation
  - Normalization
  - Subsampling of EMG data
- t-SNE
- RNN
  - Network shape
  - Data input shape
  - Weight initialization
  - Important weights

# Results (1): t-SNE

- Figure of t-SNE of EEG data → Separability of trials
- Possible to separate with standard NN
- Figure of t-SNE of EMG data → As expected

## Results (2): RNN

- Overview of the targets
- Hand move to target works good.
- Touch phase target also quite ok.
- hand move back target also (partially) successful
- Comparison: Training with data of one person vs. data of more participants
- etc.

- Prediction do not fit to the target borders exactly
- No working early stopping criterion (so far)
- Targets within the lift phase cannot be predicted properly
- etc.

# Blocks of Highlighted Text

## Block 1

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## Block 2

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## Block 3

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## Heading

- 1 Statement
- 2 Explanation
- 3 Example

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# Table

<b>Treatments</b>	<b>Response 1</b>	<b>Response 2</b>
Treatment 1	0.0003262	0.562
Treatment 2	0.0015681	0.910
Treatment 3	0.0009271	0.296

Table: Table caption

# Theorem

## Theorem (Mass–energy equivalence)

$$E = mc^2$$

## Example (Theorem Slide Code)

```
\begin{frame}  
\frametitle{Theorem}  
\begin{theorem}[Mass--energy equivalence]  
$E = mc^2$  
\end{theorem}  
\end{frame}
```

# Figure

Uncomment the code on this slide to include your own image from the same directory as the template .TeX file.

An example of the `\cite` command to cite within the presentation:

This statement requires citation [Smith, 2012].



John Smith (2012)

Title of the publication

*Journal Name* 12(3), 45 – 678.

# The End