

Temporal Dynamics on Decoding Target Stimuli in Rapid Serial Visual Presentation using Magnetoencephalography

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Table of Contents

- 1 Introduction
- 2 Experiment
- 3 Methods
- 4 Results and Discussion
- 5 Conclusion
- 6 Acknowledgements

Detail of Contents (Delete)

- 1 Introduction
- 2 Experiment
 - Task Design
 - MEG and MRI acquisition
- 3 Methods
 - MEG and MRI Preprocessing
 - MVPA
 - Cortical Neuronal Activation Estimation
- 4 Results and Discussion
 - MEG Signal Visualization
 - MVPA Scores
 - MVPA Scores
 - Cortical Neuronal Activation
- 5 Conclusion

Table of Contents

- 1 Introduction
- 2 Experiment
- 3 Methods
- 4 Results and Discussion
- 5 Conclusion
- 6 Acknowledgements

Introduction

Background

Rapid serial visual presentation (RSVP) has been widely used in brain-computer interface (BCI) as a high efficient paradigm [1]. RSVP-BCI has been applied in many areas such as data categorization [2], face recognition [3], speller [4] and website evaluation [5].

Introduction

Motivation

Introduction

This work

- 1 Introduction
- 2 Experiment
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 - MEG and MRI acquisition
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- 4 Results and Discussion
- 5 Conclusion
- 6 Acknowledgements

Task Design

Subjects

Stimulus

Scanners

MEG and MRI acquisition

MEG
MRI

Table of Contents

- 1 Introduction
- 2 Experiment
- 3 **Methods**
 - MEG and MRI Preprocessing
 - MVPA
 - Cortical Neuronal Activation Estimation
- 4 Results and Discussion
- 5 Conclusion
- 6 Acknowledgements

MEG and MRI Preprocessing

De-noise
Filter

MVPA

Segment
Spatial filter
SVM

Cortical Neuronal Activation Estimation

Alignment

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- 1 Introduction
- 2 Experiment
- 3 Methods
- 4 Results and Discussion
 - MEG Signal Visualization
 - MVPA Scores
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 - Cortical Neuronal Activation
- 5 Conclusion
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MEG Signal Visualization

Joint plot of evoked

U07

U30

MVPA Scores

Accuracy

F1-score

Recall ratio

MVPA Scores

Scores in temporal resolution

Cortical Neuronal Activation

Evoked activations

Table of Contents

- 1 Introduction
- 2 Experiment
- 3 Methods
- 4 Results and Discussion
- 5 Conclusion**
- 6 Acknowledgements

Conclusion

Table of Contents

- 1 Introduction
- 2 Experiment
- 3 Methods
- 4 Results and Discussion
- 5 Conclusion
- 6 Acknowledgements**

Acknowledgements

Big thanks