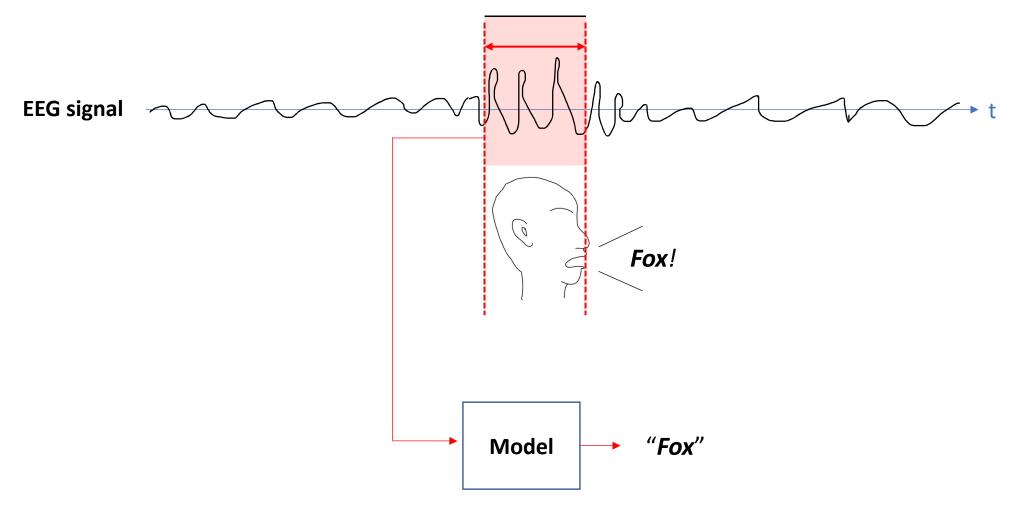
Word's Prediction from Pre-Speech EEG Using a Machine Learning Model

Kanazawa Institute of Technology, Computer Engineering
Shogo Honda

Concept



Word's Prediction from Speech Preparation EEG Data Using a Machine Learning Model

Nakazawa Lab, 2D10, Shogo Honda

output weight

feedback weight

Output layer

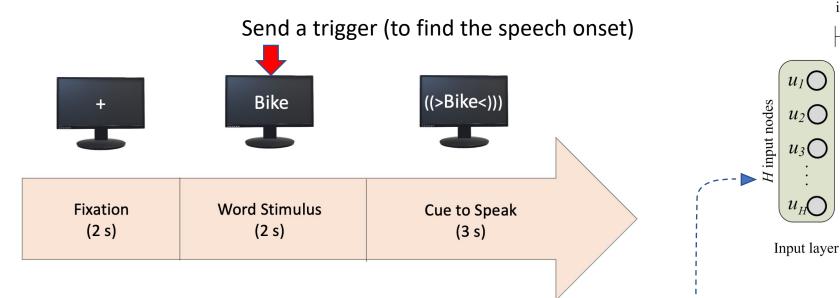
internal weight

N reservoir

dynamical reservoir

Echo State Network

Method & Progress



Recording

- EEG
- Audio
- Trigger signals



Figure of experiment

Preprocess

Current Classification accuracy: 30% Improvement:

input weight

- Extracting Rich EEG data by filtering
 - Modifying the output weight update

Reference

[1] Li G, Li B-J, Yu X-G, Cheng C-T. Echo State Network with Bayesian Regularization for Forecasting Short-Term Power Production of Small Hydropower Plants. *Energies*. 2015; 8(10):12228-12241. https://doi.org/10.3390/en81012228