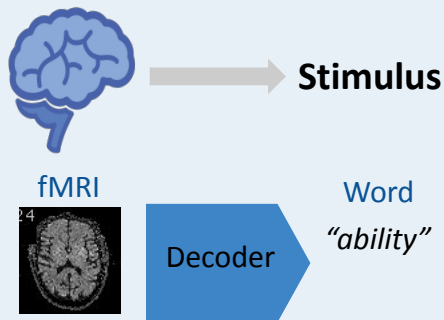


Improving Brain Decoding Methods and Evaluation

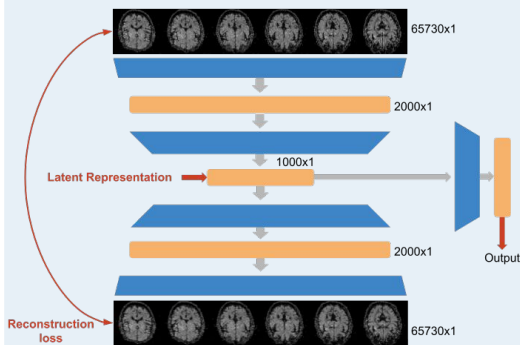
Damián Pascual, Béni Egresy, Nicolas Affolter, Yiming Cai, Oliver Richter, Roger Wattenhofer

ETH zürich

Brain Decoding

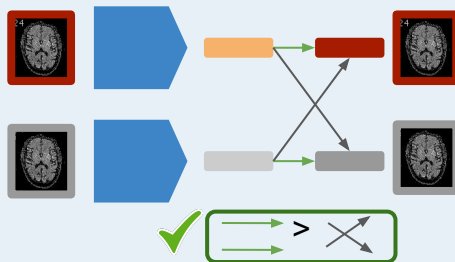


Decoder



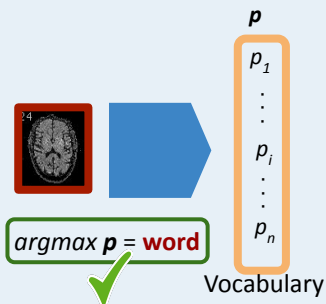
Evaluation Tasks

Pairwise Classification



Models spurious textual information!

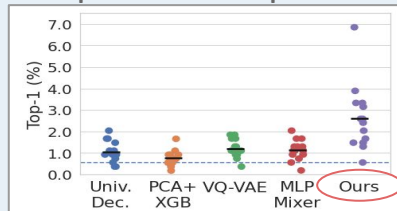
Direct Classification



Results

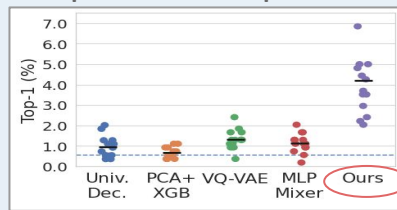
Leave-one-out

Top-1: 2.6% Top-5: 9.8%



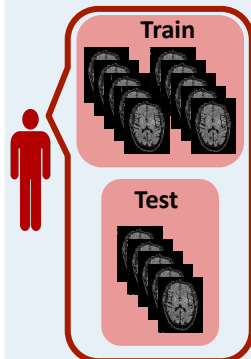
Fine-tuning

Top-1: 4.2% Top-5: 12.9%



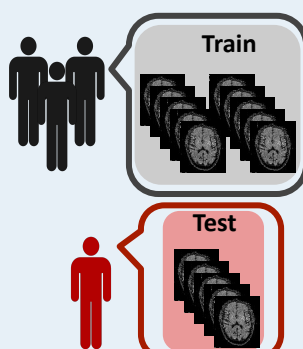
Data Splits

Intra Subject



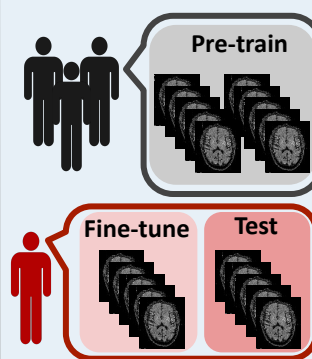
New subject:
Record new data

Leave-one-out

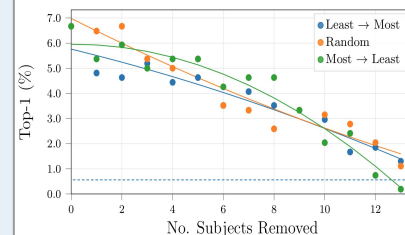


Harder: subject variability
More data available

Fine-tuning



Removing Training Subjects



More data is needed!