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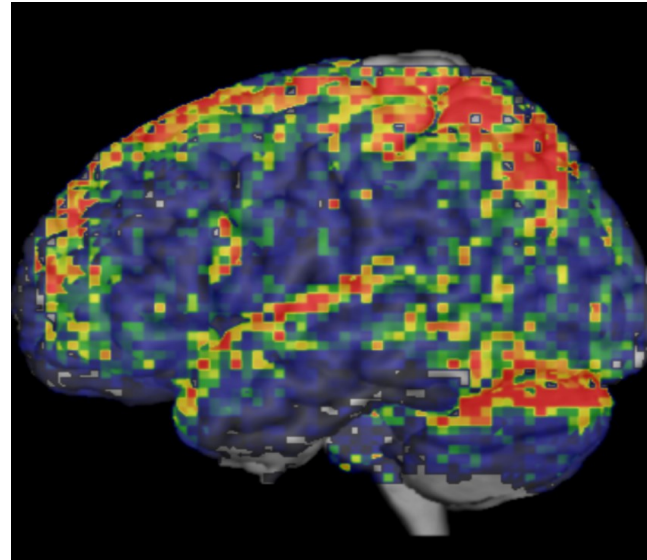
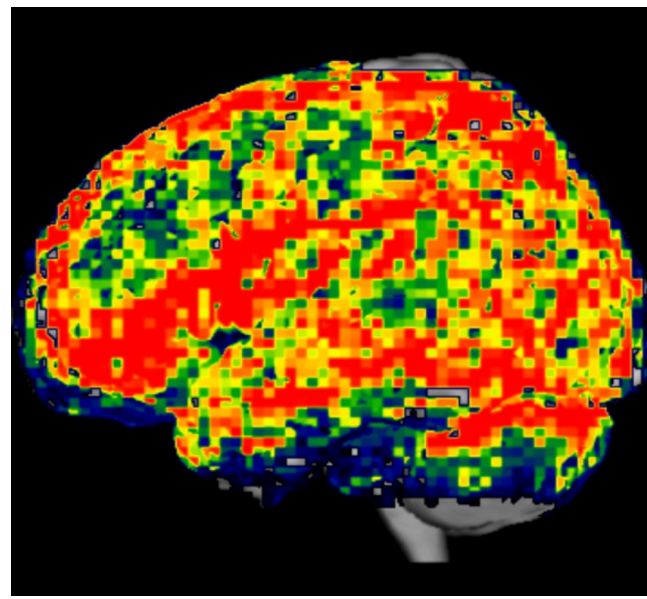
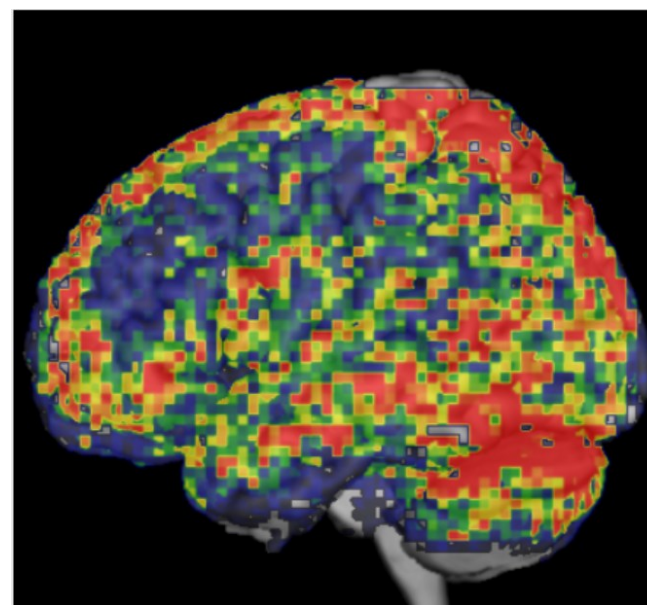
Try to play on the board. Can you find a strategy for the game? Players, based on their operation, are divided into two parts:

- 1-players who can find a strategy.(latchers)
- 3-players who did not guess anything. (explorers)

fMRI data is obtained during playing participants and their rest. We have divided the dataset based on the prior category to study the brain network and criticality more precisely.

## Results

## Latchers



## Explorer

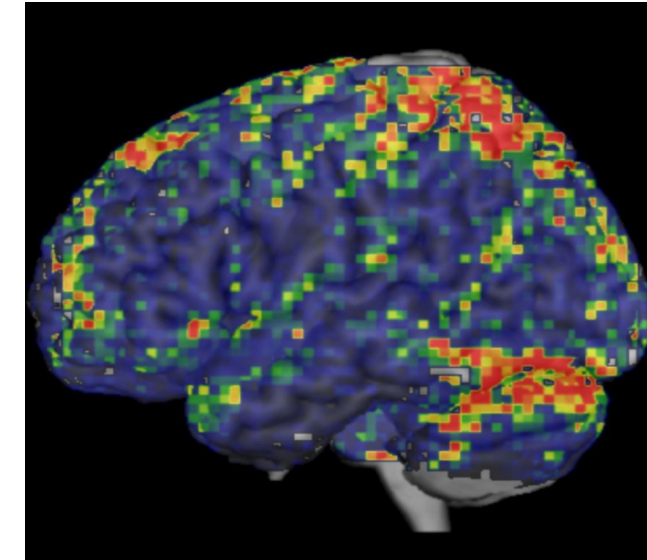
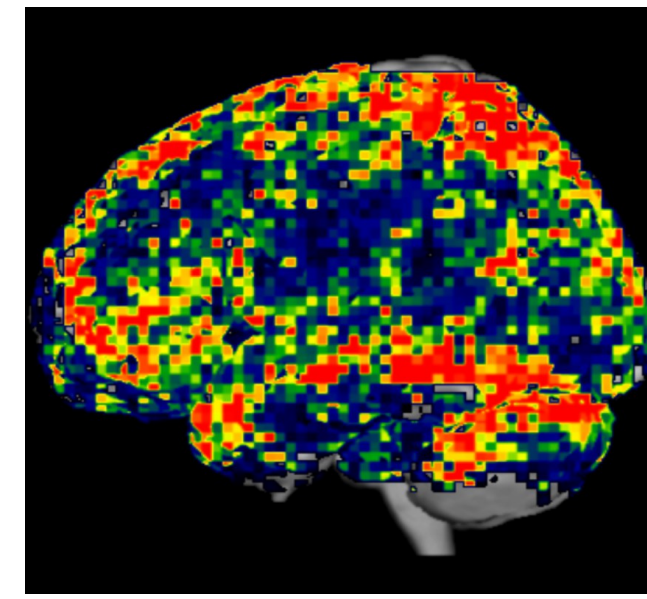
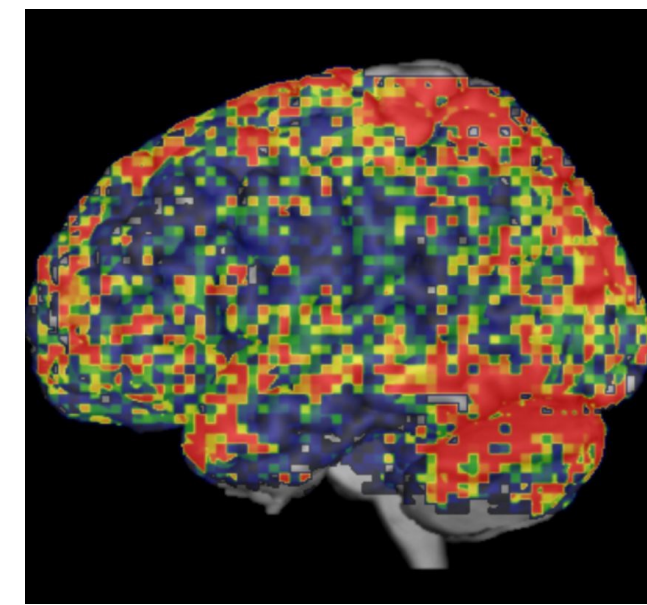


Fig 1. Mean of power frequency (less than 0.01 Hz), during the game

Fig 2. Mean of power frequency (more than 0.01 Hz), during the game

Fig 3. Mean of power frequency (more than 0.01 Hz), during the rest.

## Future work

Powers can be used as weights for constructing the brain network from data. Furthermore, it is possible to use Ising model based on the brain network, which is a practical model in statistical physics. In Ising initial conditions are random, and each particle randomly chooses a positive or negative state. Also, a phase transition between the random phase and the ordered phase can be seen. We want to find an order parameter which describes transition well to find criticality in the brain during latching.

# Let's Play Nim!

1—2—3—4—5—6—7—8—9—10—11  
12—13—14—15