Introduction to Computational Neuroscience
Practice IX: Brain-Computer Interfaces

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Request: Please record the time you will spend of this homework and add it to the report. This is just for me to balance the amount and the difficulty level of the exercises.

Exercise 1: Questionnaire (0.5pt)
Please provide full and detailed answers.

$\mathbf{Q_1}$: Explain the difference and the relationship between episodic and semantic memory.

$\mathbf{Q_2}$: How does the Morris water maze work?

$\mathbf{Q_3}$: Explain one candidate mechanism for working memory.

$\mathbf{Q_4}$: Which brain area is crucial for declarative long-term memory?

Exercise 0: Article? (2pt)
...

Exercise 0: t-test andmete peal? (1*pt)
...

Exercise 0: Optical illusions (0.5pt)
Your task is to find and explain an example of an optical illusion, which has an explanation of what causes it.

- Find a picture of a video with the illusion you find interesting.
- Describe what is happening (how our perception is wrong).
- Explain what can be the reason behind this illusion, what is the neural mechanism, which prevents us from seeing things as they really are.
- How this misperception can affect our everyday life? Why evolution decided to introduce this flaw in our system?

Here are some places to check out:

- `http://michaelbach.de/ot/index.html`

- `http://illusionoftheyear.com/cat/top-10-finalists`
- `http://www.youtube.com`

Please submit a PDF report with answers to the questions and comments about your solutions. You report should contain figures, explanations, the essential parts of the code you have produced, etc. If the code is too massive you can add it to the submission and upload everything as a `zip` archive. But single PDF is preferred.