Block Practical: Connectionist models and cognitive processes

Part 5: Writing the Report

Olivia Guest

Overview

▶ Due by end of 0th week of Hilary term; length: 2-3k words

Overview

▶ Due by end of 0th week of Hilary term; length: 2-3k words

Aim to demonstrate that you understand the basics of the model and the theory

Overview

▶ Due by end of 0th week of Hilary term; length: 2-3k words

Aim to demonstrate that you understand the basics of the model and the theory

Use your answers to the questions from last week to guide you

1. Introduction

1. Introduction

2. Methods

1. Introduction

2. Methods

3. Results

1. Introduction

2. Methods

3. Results

4. Discussion

Which cognitive theory and what is the computational model?

Explain: theory, what cognitive process/system you plan to model, the high-level architecture of model

Which cognitive theory and what is the computational model?

► Explain: theory, what cognitive process/system you plan to model, the high-level architecture of model

Why does modelling help us?

Which cognitive theory and what is the computational model?

Explain: theory, what cognitive process/system you plan to model, the high-level architecture of model

Why does modelling help us?

What is the goal of the current model?

Which cognitive theory and what is the computational model?

 Explain: theory, what cognitive process/system you plan to model, the high-level architecture of model

Why does modelling help us?

What is the goal of the current model?

What part of cognition are we modelling and why did we chose this way?

The reader must be able to replicate the model!

▶ How did you replicate the model? Language, libraries, etc.

- ► How did you replicate the model? Language, libraries, etc.
- ► Table with parameters. Why did you chose these values?

- ► How did you replicate the model? Language, libraries, etc.
- ► Table with parameters. Why did you chose these values?
- What kind of training algorithm? What training patterns?

- ▶ How did you replicate the model? Language, libraries, etc.
- ► Table with parameters. Why did you chose these values?
- What kind of training algorithm? What training patterns?
- Did you try lots of settings? Document all of them.

- ▶ How did you replicate the model? Language, libraries, etc.
- ► Table with parameters. Why did you chose these values?
- What kind of training algorithm? What training patterns?
- Did you try lots of settings? Document all of them.
- Are certain values of the parameters essential? Can we absract over ranges of values?

- ▶ How did you replicate the model? Language, libraries, etc.
- ► Table with parameters. Why did you chose these values?
- What kind of training algorithm? What training patterns?
- Did you try lots of settings? Document all of them.
- Are certain values of the parameters essential? Can we absract over ranges of values?
- ▶ When did you chose to stop training? What was the range of the weights when you did? What was the error when you did?

How do we test our model and how does it fare?

▶ What are the experiments you ran? Do you need graphs to demonstrate this?

How do we test our model and how does it fare?

► What are the experiments you ran? Do you need graphs to demonstrate this?

How are you chosing to evaluate your model's output?

How do we test our model and how does it fare?

▶ What are the experiments you ran? Do you need graphs to demonstrate this?

How are you chosing to evaluate your model's output?

Are you looking at the hidden layer or the output layer, the sum squared error, something else?

How do we test our model and how does it fare?

▶ What are the experiments you ran? Do you need graphs to demonstrate this?

How are you chosing to evaluate your model's output?

► Are you looking at the hidden layer or the output layer, the sum squared error, something else?

▶ Show all the evidence needed to help the reader understand your results.

What have we learned?

► How does your work for into the broader picture of model and theory?

What have we learned?

How does your work for into the broader picture of model and theory?

▶ Justify what's wrong if there is something wrong with implementation or with model or even with theory

What have we learned?

How does your work for into the broader picture of model and theory?

▶ Justify what's wrong if there is something wrong with implementation or with model or even with theory

▶ Is the original paper a good model?

What have we learned?

How does your work for into the broader picture of model and theory?

 Justify what's wrong if there is something wrong with implementation or with model or even with theory

Is the original paper a good model?

Is your replication a good model and a good implementation?

What have we learned?

▶ Do you understand the original work more?

What have we learned?

Do you understand the original work more?

Discuss the original work and how modelling it yourself (i.e., replicating) helped.

What have we learned?

Do you understand the original work more?

Discuss the original work and how modelling it yourself (i.e., replicating) helped.

Why is replication useful?

What have we learned?

▶ Do you understand the original work more?

Discuss the original work and how modelling it yourself (i.e., replicating) helped.

Why is replication useful?

Are there any experiments you would propose to carry out now you know more?