

Computational Neuroscience Project

André Ramon Zarza Tapia, Clara Hornung, Martyna Siatka
CogSup Master's

May 31, 2025

Abstract

This project explores computational models in neuroscience, focusing on the simulation and analysis of neural systems. We implement and evaluate various models to understand neural dynamics, information processing, and learning mechanisms. The results provide insights into the computational principles underlying brain function and highlight the potential of computational approaches in neuroscience research.

Contents

1	Introduction	4
1.1	Background	4
1.2	Research Question	4
2	Methods	5
2.1	Data Acquisition	5
2.2	Preprocessing	5
2.3	Model Description	5
2.4	Parameter Estimation	5
2.5	Evaluation Metrics	5
2.6	Implementation Details	5

1 Introduction

This paper we use all the information from class. we need to studz all this etc etc etc.
Changing to create unstaged edits

Write your introduction here. This file contains all content related to the introduction section.

You can divide this further into subsections if needed:

1.1 Background

Background information goes here.

1.2 Research Question

Your specific research questions go here.

2 Methods

2.1 Data Acquisition

The data was taken from specific files.

2.2 Preprocessing

Explain any preprocessing steps applied to the data.

2.3 Model Description

algorithms are cool.

2.4 Parameter Estimation

Describe how model parameters were estimated or optimized.

2.5 Evaluation Metrics

List and define the metrics used to evaluate model performance.

2.6 Implementation Details

Provide relevant implementation details, including software and hardware used.