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Project 2: Building a Neural Network code

Applied Data Analysis and Machine Learning

UiO (FYS-STK4155)

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November 10, 2025

GitHub link to the project repository:
https://github.com/p-perrone/UiO_MachineLearning/tree/main/ml_project1
Link to DeepSeek chat:
https://chat.deepseek.com/share/h2ifare1m1c31ud8vf

Abstract

content...

Contents

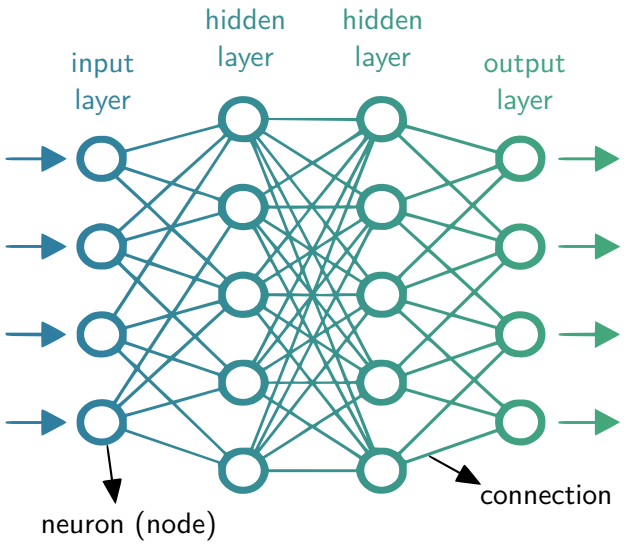

Figure 1: Neural Network | A typical structure.

1 Introduction

An Artificial Neural Network is a computational model that emulates the functioning of human brain, in the way it can process several informations in parallel, resulting in a form of "intelligence" (Wang, 2003).

A typical Neural Network (NN) is represented in Figure 1. It generally consists of connected units, called, *nodes* or *neurons*. Every node receive a specific *signal*, *i.e.* a real number, from its connected node. Nodes can be regrouped in specific layers, and the signal travels from the input layer to the output layer, passing through an arbitrary number of *hidden layers* (Bishop, 2006).

2 Theory and methods

3 Materials and data

3.1 Structure of a Neural Network

3.1.a Activation functions

3.1.b The Feedforward algorithm

3.1.c The Backpropagation algorithm

3.1.d Training the Neural Network

3.2 Cost functions