



# UNIVERSITETET I OSLO

## **Project 1: Linear regression methods, regularization, resampling**

Applied Data Analysis and Machine Learning  
UiO (FYS-STK4155)

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**GitHub link to the project repository:**

[https://github.com/p-perrone/UiO\\_MachineLearning/tree/main/ml\\_project1](https://github.com/p-perrone/UiO_MachineLearning/tree/main/ml_project1)

**Link to DeepSeek chat:**

<https://chat.deepseek.com/share/h2ifare1m1c31ud8vf>

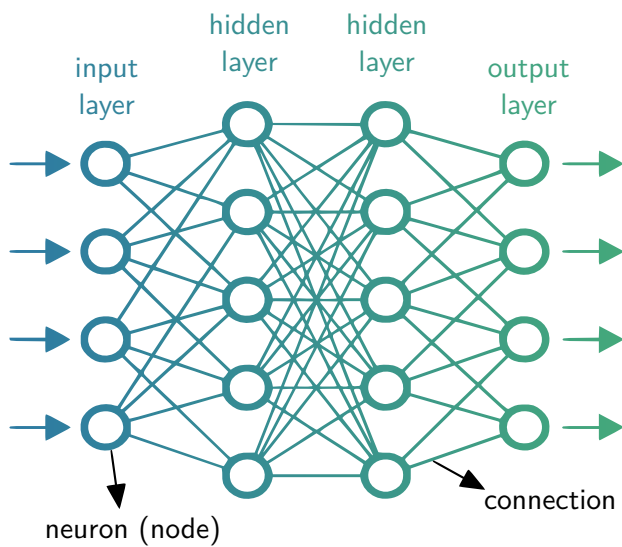
**Abstract**

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## 1 Introduction

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## 2 Theory and methods

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## 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