Project 2 FYS-STK4155 Autumn 2018

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1 Introduction

The one sentence about what machine learning is for the new guy.

The concept of machine learning have gained hughe popularity over the last couple of years. Different machine learning techniques have a wide range of applications and can be a major asset if you know when to use what. When to use what is exactly what we're going to have a brief peek into in this project.

The last couple of years different machine learning techniques have gained enormous popularity due to several factors.

Two widely used machine learning methods are logistic regression and neural networks. In this project we aim to evaluate the performance of these two methods on an often studied problem in physics.

First we use both methods to predict the energy of the system. Then we apply both methods over again to predict the phases of the systems.

2 Method

2.1 Performance measures

2.1.1 Accuracy score

2.2 The Ising model

3 Implementation

Implementation is done in python.

4 Analysis of the models

5 Conclusion