

Bachelorthesis

Anders Thuesen

September 2021

1 Research

Max Tegmark has written a paper “Why does cheap and deep learning work so well?” in which he argues that the reason why neural networks are so good at modelling probabilities is that the real world as we observe it is based around a simple Hamiltonian describing the energy of a system, which is often just a polynomial of relative low degree. It turns out that neural networks are very good at approximating these polynomial functions.

- Flattening sometimes makes things more complicated. FFT for instance. Where you could

2 Introduction

$$\sum_{x=0}^{\infty} n^2$$