**Algorithms**

For my final project, I will explore algorithms in software, with a main focus on what I call ” Entertainment-software”, which is software that is usually being used to entertain their users, or software that is being used in the users free time. Entertainment-software could for example be Netflix, Spotify, Instagram and Facebook. All of these programs use algorithms, to decide how and what content is relevant to the user. Therefore, I will begin my project with exploring what algorithms is, by exploring the history of algorithms and some of the different kinds of algorithms that exists. Furthermore, I would like to show examples of how the algorithms are used in the entertainment-software and where we might be able to see them, if we actually are aware of them existing. Finally, I want to further explore the pros and cons of algorithms in connection to the people using the software.

**The importance of algorithms**

The reason I chose to explore this subject, algorithms, was because I realised what a big influence, it has on all of our lives. Even though you might be a person who does not really use a computer or a Smartphone, or even a person who does not own either of these two things, your whole life is still influenced by algorithms. Algorithms have a huge influence on the economy, the culture, the health sector and so on, and therefore, whether you actively use technology or not, they will have an influence on your life.

Of course, this also indicates, that software in general has a huge influence on our lives. A lot of people now a day use some kind of software in their everyday activities. Some people use it as the first thing in the morning, when they have set an alarm on their phone, maybe they are also checking up on various social media apps, or maybe their emails or text messages, and most people go through the same routine just before falling asleep. Not to mention that many peoples’ work, school or free time is dependent on a lot of software as well. My point is, that software now a day plays a crucial part in our lives, and because of this, it is very important that we remain critical towards the software that we use and are aware of how it might affect our view on the world. And especially the last part with *how* software might affect our view on the world, I believe, is deeply dependent on algorithms, and which things they are designed to highlight and which things they are designed to “remember”.

**The history of algorithms**

But to understand how algorithms influences almost every part of our life, it is necessary to get a better understanding of what an algorithm really is. Therefore, I would like to go through some of the history of algorithms, by exploring where it originated from and how it came to play such a crucial part, of computation and software, and further explore and explain some of the different algorithms and how they work in some of the software most people know and use almost every day.

To further explore these questions, and hopefully find some fulfilling answers, I will use the book called “What Algorithms Want” by Ed Finn, and more specifically, I will use the chapter called: “What is an Algorithm”. In this chapter, Ed Finn, among other things, explores the history of algorithms from the very beginning, where algorithms got the name from the famous mathematician Abū ʿAbdallāh Muḥammad ibn Mūsā al-Khwārizmī. He further gives other examples of algorithms used in history and explains algorithms as such:

” As the word gained currency in the centuries that followed, “algorithm” came to describe any set of mathematical instructions for manipulating data or reasoning through a problem.” (P. 17)

I find this book very useful, when exploring the history of algorithms, but also to highlight some of the different ways of defining an algorithm.

My main focus will be on this book, when exploring what an algorithm is, and how it is used.

**Pros and cons**

I will also be using the BBC documentary called “The Secret Rules of Modern Living - Algorithms”, to explain different kinds of algorithms there exists. This documentary gives some good examples and explanations of different algorithms, and they have explained them using different ways of visuals, which makes it easier to understand them, which could be an inspiration when I have to explain some of the algorithms in the final project. Furthermore, the documentary also gives examples on how some of these algorithms are being used in the real world, to solve difficult and complicated problems, that would take far too much time for a person to solve in the real world. One of these problems, is organ donation, where there previously was an issue in finding a matching donor. This problem was solved by using an algorithm, that was able to find a matching donor across the country, by comparing tons of data of people in need of a donation, with people willing to donate. This work would have taken a human being forever, whereas an algorithm was able to solve it within 30 minutes.

This is just one example amongst many, of how an algorithm has helped easing out, what could have been a lot of work for human beings. I would like to highlight some other places where an algorithm helps as well, and with more focus on some of the entertainment-software. For example Netlifx and Spotify both uses algorithms to create suggestions for you, which sounds pretty amazing, but I would like to explore just how these algorithms work in the entertainment-software, and also discuss whether or not these algorithms that are used, are helpful at all.

To answer these questions, I will explore further just what the algorithms emphasizes when companies like Netflix are creating suggestions for the user. Is it the amount of views by others? The grade it got on IMDB? Based on the genre you have previously watched? The actresses/ actors?

Furthermore, I would like to explore how algorithms creating suggestions, might be a bad idea. At first it might seem like a brilliant idea to create suggestions for people, but how can these suggestions influence the way we perceive the world?

**Summed up**

In short, I would like to explore what makes an algorithm and the history of the algorithm and its increasing influence on the world. Finally, I would discuss the pros and cons of the algorithm as we know and use it today.

**References**

* Ed Finn, “What is an Algorithm,” in ”What Algorithms Want”, MIT Press, 2017
* Andrew Goffey, "Algorithm", in ”Software Studies – A lexicon”, by Fuller, MIT Press, 2008
* David Briggs, ”The Secret Rules of Modern Living: Algorithms”, BBC Four, 2015