Proposal

What should be in the draft:

- Good idea of research

- How will it be approached

- Show that I have enough knowledge

Important points:

Motivate your thesis from both societal and a scientific perspective

Write the background section in a manner that is consistent with your rqs

Describe the exact methods you intend to use (which features, ML methods, etc.)

Working plan: Make it very detailed (best: week by week plan).

Prof. will not give feedback on the actual proposal until we actually submit it. He will only give feedback on the draft.

Think about how you wanna evaluate the algorithms.

Put the rqs in the project definition.

We can write in I form. Some people have issues with that. Prof. will make sure that the second reader doesn’t complain about that.

Outline

Project Definition: Provide a clear description of the problem you plan to address.

Motivation: Explain why this problem is worth addressing (scientific and societal).

Background: What is known in the scientific literature. At least five relevant sources. Sources must be recent, high quality and useful.

Dataset Description: Describe the dataset that is used.

Algorithms and Software: Which algorithms and software will be used? How will ML algorithms be evaluated? What is the baseline? How can ground-truth data labeled data be obtained? -> So I can measure accuracy, precision, or some other metric.

Evaluation Method: How will the results be evaluated?

Milestones and plan: Sketch out some major intermediate milestones.

## Project Definition

The internet has enabled humankind to access information, exchange ideas and become part of a community. Of course, that also applies to message boards. Ever since the internet found mainstream adaption, people joined those message boards to discuss about trading the stock market. Most recently the reddit forum wallstreetbets attracted a lot of interest and now counts over 10 million members. While the wallstreetbets community minted many millionaires, there are also numerous people who lost their life savings.

Even though the reddit subforum was already founded in 2012, it got most of the media attention in 2021 due to a short-squeeze of the GameStop (GME) stock that drove the stock price up several hundred percent. However, it was not the rapid price appreciation that amazed market participants. Instead, it was the unprecedented decentralized and coordinated buying of Gamestop shares by members of the wallstreetbets community that attracted attention. (Anand & Pathak, 2021)

Interestingly, the story repeated itself when those self-proclaimed “apes” sent other stocks, such as AMC Entertainment and BlackBerry to the moon. Organizing the mass-coordinated buying of stock, however, requires that enough participants share the same sentiment. Some research shows that social media sentiment has a particularly strong impact on uninformed traders (Danbolt, Siganos, & Vagenas-Nanos, 2015).

Hence, this Master thesis will focus on the “meme stock” driven investor sentiment of the wallstreetbets subreddit. By performing sentiment analysis on the aforementioned forum, it is assumed to be able to predict changes in the stock price. Being able to accurately measure the sentiment ensures more efficient, and hence, less volatile markets.

Furthermore, this thesis will analyze how to best incorporate domain-specific language that is commonly used on wallstreetbets into the sentiment analysis.

## Motivation

Since the the wallstreetbets subreddit has become very popular just recently, there is very little academic research about the impact of the community on financial markets so far. This thesis not only tries to shine some light on this novel challenge, but also tries to put forward some methods that can be used to perform sentiment analysis.

**Do some more brainstorming.**

Furthermore, as mentioned earlier the “to the moon” movement had a tremendous impact on the lives of individuals, both to the positive and negative. Besides that, however, many investment funds have been negatively impacted by the recent short-squeezes. While it might seem noble to root for individuals who try to force large funds out of their positions at big losses, it is easy to forget that many of those funds manage money for charitable endowment funds, pensions and others.

## Background