# Introduction

Imagine you are a data science student who just graduated from university. For your first job, you have to move to a new city. You are playing with the idea of using some of your savings and your first earned money to buy your own small apartment. Therefore, you are scanning the Internet for home listings to check which property would be the best investment for you. But between all these flooded housing listings and the variety of emerging real estate platforms these days, how do you decide which property to buy at a time of real estate boom? What are the important attributes that make a property valuable? Artificial Intelligence (AI) and especially Neural Networks (NNs) have become a reliable instrument for making predictions that are based on a huge amount of data and attributes – so-called features – in the last years. NNs are currently used for a number of various use cases such as voice and image recognition. In this paper, we are using NNs to build a prediction model that can forecast house prices. Such a prediction model would not only be interesting for home buyers who scan the Internet for flooding home listings but also for renters or investors. Consequently, the object of our analysis is to predict the sale price of a house based on a set of features such as the number of bathrooms, square footage, the number of floors, garages, pools, neighboring values, etc. For our analysis, we use the Ames Housing dataset which was compiled by Dean De Cock and can be seen as an alternative to the often-cited Boston Housing dataset (Harrison and Rubinfeld 1978). This dataset consists of 79 explanatory variables describing (almost) every aspect of residential homes in Ames, Iowa.

In detail, the dataset consists of … [@Marcel: Ab hier dann du]