FAF.FIA16.1 Spring 2021
Lab 3: Linear Regression

Handed out: February 12, 2021

Oh these prices..

The company is sending you to live at the "Golden Rule" space station. And while the variable gravity doesn't seem to bother you, the prices for housing there do. You would like to know how much an apartment could cost but all the consulting companies ask for incredible amounts of money, so the solution is thus obvious – you'll need to find out yourself.

Being a qualified AI specialist you decide to over-engineer it a bit and create a program that could predict the price of an apartment given a set of characteristics of the apartment complex it is part of. You get your hands on some unformatted historical data about apartment complexes on the space station and their prices. The old man who supplied the data said that the fields that you might be interested are complexAge in column 3, totalRooms in column 4, totalBedrooms in column 5, complexInhabitants in column 6, apartmentsNr in column 7 and medianCompexValue in column 9.

Because running personal projects on production machines is a big no-no at the company, you've dug up an old server that can run Google Colab Notebooks and has Keras pre-installed as the only ML library (beggars can't be choosers). You'll need to create a model that would perform linear regression on the available data. As a result, the model should be able to predict the medianCompexValue of an apartment complex, given a set of it's characteristics. Perform some simple statistical tests to determine the accuracy of your model.

Reporting

At the end of this lab, you will need to submit your *source code* and a *report* describing what you have implemented. The report and link to a publicly available repository with the source code must be uploaded on Else, in the according assignment activity. Any code repository should contain a *readme* file (here's a tutorial on what to consider when making a good one).

Good Luck!