25 January 2022

- 1. Warm up: Answer the following questions.
 - (a) In your own words, what is a *histogram*?
 - (b) In what situations can a *scatter plot* be turned into a *line plot*?
 - (c) True / False: The space of all colors a human eye can detect is 1-dimensional.
- 2. Daily Python: Open up Python and load the packages numpy and matplotlib.
 - (a) Toss a six-sided dice 100 times using the random.randint function from numpy.
 - (b) Plot the numbers tossed as a histogram in matplotlib. Is there a pattern?
 - (c) **Bonus:** Repeat the results with two dice: one 6-sided, one 20-sided, and toss them 1000 times. Plot the sum of the numbers of each toss.
- 3. Main task: This task is about scraping and comparing data.
 - (a) Choose a category (and subcategory) in **ss.lv**. Make sure there are at least two columns that can be interpreted as numbers (that is, on a scale).
 - (b) Access the page through Python using the requests and BeautifulSoup packages.
 - (c) Plot the results as a scatter plot, indicating the axes.
 - (d) Plot the results as a *heatmap*.
 - (e) Use three different colormaps for the heatmap. Which is best?

Submit the result on ORTUS.