# General information on the data and the survey

The University of Helsinki participates in the Finnish career tracking survey that analyses the careers of academic graduates over a period of five years after graduation. As a rule, the core target group consists of second-cycle (master's) graduates, but also includes early childhood education teachers and Bachelor of Science (Pharmacy) graduates. A survey targeting doctoral graduates is conducted three years after graduation. This app has been created for the analysis of one area of the survey data. The data only includes graduates of the University of Helsinki, specifically master's graduates of 2003, 2005, 2007, 2009, 2011, 2012 and 2013, and doctoral graduates of 2015. The latest data was collected in autumn 2018.

The app focuses on job market needs and on how well university studies develop certain skills areas. In the surveys, respondents are presented with variables and asked to assess, on a scale of 1 to 6, how useful certain skills have been in the job market and how well university studies have developed those skills. Please note that the variables change to some extent from year to year, and the same variables are not included in all surveys.

# Explanations of graphs and categories

#### Graphs

The app contains various graphs. Scatter graphs enable you to examine all the variables included in a specific year's survey in the category of your choice. By default, scatter graphs include lines on both the Y and X axis next to the number 4 to illustrate the necessity of the variables in the job market or how well the education developed the skills in question. In addition, the graphs include three diagonal lines. The slope of all the coloured lines is 1, with the only difference being the intersection with the Y axis. The first, green line goes through the origin, describing a situation in which the job market need has been assessed as equal to the development of the skills area by university studies. The second, orange line is one increment from the green centre line. If a variable is on the orange line, the job market need is one increment more than the skill development level from university education. On the red line, the distance is two increments. The farther the variable is from the green line, the poorer the correlation is between university education and job market needs. If you wish to assess the insufficiency of skills developed by university education for a specific variable, you should examine its horizontal distance from the green line.

The app also uses line graphs. They enable you to explore the development of a specific skills area in a specific category. Please note that the app does not take into account whether year-on-year changes are statistically significant. You must analyse the data separately to find out.

In the third type of graph, all responses are presented as a distribution.

#### Categories

The app uses two categories. The data can be investigated by faculty. Please note that the faculty division in the app corresponds to that effective in 2019, which also affects old results. The grouping into disciplines is a data-based category which helps to obtain more detailed information.

## Protection of data

Because the app runs on an external server, the anonymity of respondents has been ensured. Individual respondents cannot be identified.

### Feedback

You can send feedback directly to tuukka.kangas@helsinki.fi.

## Contact details and implementation

The app has been developed by Tuukka Kangas (tuukkavkangas@gmail.com). The app was created using R language as well as the open Shiny package and other necessary packages. The source code has been published in <u>GitHub</u>.

#### Licence

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