

## Information Visualizations in R

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<b>Organization</b>	Digital Skills, University of Lucerne
<b>Language</b>	English
<b>ECTS-Points</b>	2
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<b>Dates and time</b>	Friday 18th & Friday 25th November 2022 09:30 – 16:30
<b>Content</b>	<p>The R programming language offers a huge variety of statistical analysis solutions with over 16000 packages available to install and continues to expand in areas like visualization, text analysis and machine learning.</p> <p>This course focuses on the graphical solutions that the R programming language can provide through a powerful R package called {ggplot2}. This package follows the “The Grammar of Graphics” approach and enables users to create visualizations that summarise data in an elegant and informative way.</p> <p>This course is split into two parts:</p> <p>Part 1:</p> <ul style="list-style-type: none"> <li>• Introduction to basics in R and basic data manipulations</li> <li>• Introduction to {ggplot2} package and constructing visualizations</li> </ul> <p>Part 2:</p> <ul style="list-style-type: none"> <li>• Univariate type graphs for quantitative &amp; qualitative data types</li> <li>• Bivariate and multivariate type graphs</li> <li>• Creating information visualizations for research</li> <li>• Customising graphs (axis, colours, labels etc.)</li> <li>• Building interactive graphs</li> </ul>
<b>Prerequisites/ Materials</b>	<p>For Part 1, no prior R knowledge is expected. For Part 2, course participants are expected to have some basic knowledge of the R programming language with some basic data analysis skills such as data manipulation.</p> <p>Participants should have their own laptop with R, RStudio and the relevant packages installed. Instructions for the technical setup will be circulated by the instructor before the course. Learning material such as slides, code and solutions to exercises will be circulated by the instructor after the course.</p>
<b>Teaching method</b>	This course includes a range of activities such as demos, live-coding sessions, interactive quizzes, and practical exercises to work individually or in a group. Active participation and contribution are recommended.