

# R Summer Camp 2020

## (P)refresher for students, who will use R in their fall course

Organizers: Dr. Tim Elrick, Prof. Thomas Soehl, Prof. Aaron Erlich, Prof. Peter McMahan

Quantitative approaches comprise a large and growing part of social science and humanities research. It is increasingly difficult to take graduate level courses and read important papers in your field without an understanding of statistical inference, programming, and mathematical models. McGill offers a wide range of courses to give you competency in these areas, but sometimes, graduate students feel inadequately prepared to take advantage of these resources.

To help you make the most of your studies, the Faculty of Science, the Departments of Political Science and Sociology, the Desautels Faculty of Management, the Consortium on Analytics for Data-Driven Decision-Making (CAnD3), the Centre for the Study of Democratic Citizenship (CSDC) and the Geographic Information Centre (GIC) financially support this weeklong workshop before the beginning of fall term. The workshop assumes no background!

We encourage you to take this workshop, particularly if you are an incoming graduate student. A detailed outline of the syllabus will be available later in the summer.

This workshop will introduce you to R, a common statistical programming language used across many courses at McGill as well as RMarkdown (a typesetting language useful for producing documents that contain mathematical content and code). These are very useful and powerful tools but they have somewhat of a steep learning curve. So, the goal is to get you up a good part of that learning curve.

- Day 1: Introduction to the basics of R and the graphical user interface RStudio
- Day 2: Working with data (cleaning, pre-processing, dealing with missing values)
- Day 3: Visualizing data and producing graphs
- Day 4: Statistical prequel and more tips and tricks on working with R
- Day 5: Typesetting using RMarkdown and RStudio Add-Ins

The workshop will take place from **Monday, August 17 to Friday, August 21** by means of *remote teaching* between 9:30 am and 4:00 pm. The instructor is Dr. Tim Elrick, Director of the Geographic Information Centre. He will be supported by teaching assistants who will make sure you won't get stuck. We also will make sure, that online units will be reasonably long with enough breaks to get away from the screen.

The workshop is *not for credit* and there is no exam. However, taking the workshop will still require your commitment. The sessions will involve a mix of lecture and hands-on practice. Just like any other skill, you can't learn coding by just watching. You have to do it to learn it.

### **Prerequisites**

NONE! If you never have coded you should not be scared off. In fact, you are the perfect student for this workshop. The goal is to give you a basic overview of the material as well as the resources and the confidence to learn more. If you already have some background, but have not used this material recently, this workshop will also be useful.

### **Registration**

The workshops are free to attend for all McGill students and members of the CSDC. If demand exceeds capacity, we will give preference to incoming students from funding departments and centres. To be guaranteed consideration register before July 31 at this link:

<https://forms.gle/4RVMVnsvXMVarNkp9>

We expect you attend the entire sessions, do any readings we assign and participate in all aspects. If you register but your plans change, that's fine but we expect that you inform us; simply not showing up you will waste our efforts and resources.

For any questions, e-mail us at [gicsupport@mcgill.ca](mailto:gicsupport@mcgill.ca). Please put "R summer camp" in the subject line. It will help us to reply to you quicker. Thank you.