

GSA workshop: 3 December 2018, Rottnest Island, Australia

1. GSA workshop objective

The objectives of this year's GLEON Student Association workshop are to present three tools:

- GitHub, a website interface for version control and collaboration,
- rB3, a QA/QC tool for high-frequency data,
- rLakeAnalyzer, a package proposing standardized methods for calculating common important derived physical features of lakes including water density based on temperature, thermal layers, thermocline depth, lake number, Wedderburn number, Schmidt stability and others.

2. Before the workshop

We are going to use R for this workshop. WiFi might not be great during the workshop so make sure to download the material listed below before traveling to Rottnest Island.

Who?	What?	Approximate time to complete task
Everyone	<ul style="list-style-type: none">• Install R and R studio: link & link.• Once in R studio, download packages: devtools, tidyverse, lubridate, rLakeAnalyzer (several ways to do it, from R studio one option is to click on 'Tools' in the toolbar, then 'Install packages').	0:30
Beginners	<ul style="list-style-type: none">• Do at least the introductory course on R on Datacamp: link	4:00
Everyone	<ul style="list-style-type: none">• Read sections 1-7 and section 10 of this 'Introduction to R': link. There will be some repetitions with the Datacamp material.	2:00
Optional (but recommended)	<ul style="list-style-type: none">• Test your knowledge by playing CastleOfR: link on Github > Click 'Clone or download' > Download zip. Then follow instructions in the README file.	1:00
Optional (but recommended)	<ul style="list-style-type: none">• Create a github account: link. Follow the steps after clicking 'Sign In'.	0:10

If you have any issue downloading the resources, please send us an email at christopher.mcbride@waikato.ac.nz, riwoolway@gmail.com, rosalie.bruel@uvm.edu. One of us will try to answer and help you (if possible remotely). If you need help installing the packages (or with something else), come 30 minutes early to the workshop (see agenda).