

EAA Seminar

Open Source Tools R and Python: Extending the Toolbox of the Actuary

29/30 October 2018 | Cologne, Germany



Organised by the EAA - European Actuarial Academy GmbH.

Introduction

Over the last years, typical data science tasks like data processing and modeling have gained a stronger foothold in the day-to-day professional life of the actuary. Open source languages are renowned to be especially equipped to deal with these kind of tasks, but can also be tricky to get started with, especially when one has not been properly introduced to them. This workshop offers the opportunity to become more familiar with the open source environment and their applications, illustrated in detail by means of a number of hands-on modules, hereby enabling the actuary to tackle the data science tasks in an elegant manner.

Open source tools like R, Python and more recently Julia have gained a lot of momentum in recent years, not just in popularity but also in number of contributed code. Their respective communities are nowadays no longer exclusively composed of academic researchers and scientists, but also of professionals of all sorts of backgrounds, especially since the industry and corporate world have understood the added value of 'community driven software' and started to plug open source tools into their processes and corporate tissue.

On top of this, actuaries are confronted with the same issues as academic researchers and scientists: the production of readable, shareable and reproducible code and results. In the actuarial community, R already is a fairly known and used open source language, Python however a little bit less, even if it's also packed with potential and even if it disposes of a vast biosphere of its own. This workshop will also focus on the 'scientific stack' of both R and Python and draw some comparisons between both worlds where we will try to show that it's not a matter of choosing between both ecosystems but of choosing the best of both (continuously evolving) worlds.

Participants

This seminar is suited for all actuaries who like to broaden their existing IT toolset. Basic knowledge regarding data analysis and/or development of actuarial tools is useful, yet not required. Knowledge of R and Python is not required, as we will start the workshop from the basics of both languages during the first sessions.

Attendees are encouraged to bring a laptop computer with R and Python installed (*).

- One can install R from <https://www.r-project.org/>. As the editor we'll be using 'RStudio', which can be installed from <https://www.rstudio.com/>
- One can install Python in numerous ways but the easiest way is to install the 'all-in' distribution Anaconda (<https://www.anaconda.com/>, choose "Python 3.6" version). With anaconda installed, one has also the possibility to add R and 'RStudio' to the anaconda environment as one can notice in the 'Anaconda Navigator'.

(*) prior to the seminar, we will supply the participants with an exhaustive list of packages/libraries that need to be installed additionally to the above tools, as well as a description of how to install them.

Purpose and Nature

The goal of this 2-day seminar is to introduce the participants to both open source ecosystems and to get some basic understanding of both languages. Apart from the basics, we will introduce the participants to some solutions for problems that they will surely regularly encounter in their day-to-day job. However, note that both ecosystems are way too vast to be covered in merely 2 days but the participants will be provided with a jump start as lots of links to online resources will be provided throughout the workshop.

Language

The language of the seminar will be English.

Lecturers

Luc Kesters

Luc Kesters is a consulting life actuary for over 20 years. The last 15 years he's working with Vereycken & Vereycken, a Belgian based insurance software development and consultancy company, on actuarial and IT related jobs with a strong focus on reporting. During his career IT solutions and technology have always taken up an important part of his work. In that context, he uses Python amongst others on a daily basis.

Robin Van Oirbeek

Robin Van Oirbeek, after working as a statistical/actuarial consultant for different companies, is now working as the lead of the technical innovation (regarding modeling and tooling) of the non-life actuarial team at Belfius Insurance. He is also part-time academic as visiting professor at the AFI – Research Centre Insurance of the Faculty of Economics and Business at the KU Leuven. He uses R, amongst others, on a daily basis and this for over 10 years now.

Preliminary Program

Monday, 29 October 2018

08.45 - 09.00	Registration
09.00 - 09.15	Introduction & welcome (EAA)
09.15 - 10.45	Introduction to the R ecosystem and R basics
10.45 - 11.00	Coffee Break
11.00 - 12.30	R basics (cont'd)
12.30 - 13.30	Lunch

13.30 - 15.00	Introduction to the Python ecosystem and Python basics
15.00 - 15.15	Coffee Break
15.15 - 17.00	Python basics (cont'd)
approx. 18.30	Dinner

Tuesday, 30 October 2018

09.00 - 10.45	Importing and manipulating your data, and how to combine using R and Python
10.45 - 11.00	Coffee Break
11.00 - 12.30	Showing (off) your work: how to visualize and report results in R and Python
12.30 - 13.30	Lunch
13.30 - 15.10	It's not all static: building actuarial apps with R and Python, followed by real life actuarial applications and questions from the audience.
15.10 - 15.15	Concluding remarks, closing of seminar (EAA)

Fees & Registration

Please register for the seminar as soon as possible because of the expected demand. If there are more persons interested in this seminar than places available we will give priority to the registrations received first. Please send your registration as soon as possible by using our online registration form at www.actuarial-academy.com.

Your registration is binding. Cancellation is only possible up to 4 weeks before the first day of seminar. If you cancel later, the full seminar fee is due. You may appoint someone to take your place, but must notify us in advance. EAA has the right to cancel the event if the minimum number of participants is not reached.

Please always give your invoice number when you effect payment. All bank charges are to be borne by the participant. We will send you an invoice, please allow a few days for handling.

Your early-bird registration fee is € 790.00 plus 19 % VAT until 29 August 2018. After this date the fee will be € 970.00 plus 19 % VAT.

Venue & Accommodation

The seminar will take place at the hotel

AMERON Hotel Regent
 Melatengürtel 15
 50933 Cologne, Germany
 Phone: +49 221 54990
 E-mail: info@hotelregent.de
[Hotel website](#)

We have arranged special prices for accommodation. A single room costs € 120.00 per night, including breakfast and VAT, excluding tax for the promotion and advancement of culture in the City of Cologne (further information). This price is valid for bookings out of our allotment "EAA" until 13 October 2018. Please book your accommodation directly with the hotel. Kindly book early, as our allotment includes a limited number of rooms, and note the hotel's cancellation policy.

CPD

For this seminar, the following CPD points are available under the CPD scheme of the relevant national actuarial association:

Austria:	11 points
Belgium:	11 points
Bulgaria:	12 points
Czech Republic:	2-3 points (individual accreditation)
Estonia:	11 hours
Germany:	12 hours
Hungary:	12 hours
Ireland:	12 hours
Italy:	approx. 4 credits (GdLA individual accreditation)
Netherlands:	approx. 11 PE-points (individual accreditation)
Russia:	40 points
Slovakia:	8 CPD points
Slovenia:	50 points
Switzerland:	15 points

No responsibility is taken for the accuracy of this information.