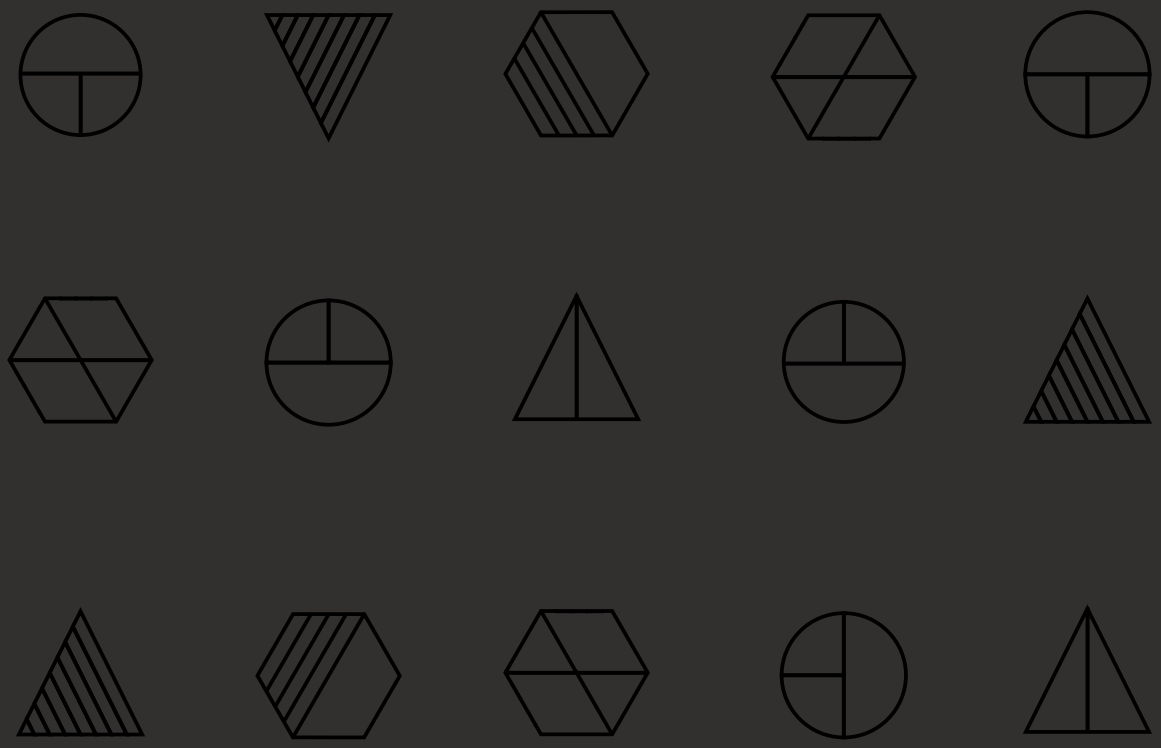
Get started with data science
and smart services
2020

Data Science Bootcamp



Maastricht University

BISS

Data Science Bootcamp

At BISS, we turn the most complex data into valuable insights. It simply is at the very core of what we do. We use our expertise to create advanced training courses on data science and smart services. Ideal programmes for individuals and teams to really develop their data skills.

Are you familiar with techniques for machine learning, but would you like to experiment with advanced, state-of-the-art techniques? Moreover, do you want to expand your knowledge in the domain of time-series? Then, the Data Science Bootcamp is the right programme for you! In different modules, we will focus on Data and Text Analytics, Neural Nets and Deep Learning.

What's in it for you and your organization?
Your data drill sergeant will teach you how to program. You will learn how to abstract data, which method to use and how to process it. You will learn how to make data ready for purposes like analytics. We help you to learn how to turn data into understandable information that actually mean something to people, businesses and society.

After this bootcamp you are totally data-ready and capable of using data from open sources. You are able to process the data and combine external with internal data. You draw automated written conclusions from textual reports and analyses. For example, you've become better at writing algorithms, preferably even a self-learning or correcting one.

How can I participate?
This is an open enrollment course, which means that as a professional looking for profound knowledge on Python programming, supervised and unsupervised Data Science, Data and Text Analytics you are welcome to participate. You already have some experience in programming and have a University/Higher Vocational Education level.

Do you want to spice up your team's knowledge or engage in an in-company and/or tailor-made bootcamp training? Feel free to contact us and check out the possibilities.

Our way of teaching
All our modules are led by an expert. We encourage you to exchange your thoughts, ideas, concepts and personal experiences with other professionals.

Overview of the programme
The programme is comprised of 5 modules and equals ten full training days. You will start the training with module 1, entitled 'Python Programming Introduction'. However, depending on your level of knowledge you might skip module 1 and hop on to module 2 called 'Data Preparation & Data Wrangling'. In that particular case you follow 4 modules and equals eight full training days.

Self-Assessment
Before the start of the programme, you will receive a self-assessment exercise to determine your presence during the first two Python Programming Introduction days of the bootcamp. If you feel comfortable solving the self-assessment exercise on your own, without any interventions, then the introduction is not necessary for you to follow. If you find the exercise challenging, taking up much of your time and/or you need assistance solving it, we warmly welcome you to the Python Programming Introduction days.

Modules

→ Python Programming Introduction
→ Data Preparation & Data Wrangling
→ Data Science
→ Text Analytics
→ Neural Nets & Deep Learning

→ 14 - 15 April 2020 (2 days)

Python Programming Introduction

During these two days the fundamentals of programming will be discussed. Next to that an introduction will be given to procedural programming, control flow instructions, modules, unit testing, I/O, objects and explanation about Pandas/NumPy.

→ 11 May 2020 (1 day)

Data Preparation & Data Wrangling

On this day, we will prepare and wrangle our data. Data wrangling is a process in which we transform and map our data from raw data into valuable and useful data.

→ 2-3 June and 8-9 June 2020 (4 days)

Data Science

During these four days, we will introduce Data Science, talk about supervised and unsupervised data science, decision trees, logistic regression and SVM Neural Nets. Next to that, topics included are generalization, cross validation, model performance and Nayve Bayes. Moreover, we will explain PCA, Clustering and Similarity, K-Means, Hierarchical clustering and Relation Time-Series/Regression/Classification.

→ 25 - 26 June 2020 (2 days)

Text Analytics

This module is about text analytics. How can information be extracted from an unstructured text, what are the major techniques for text analysis and text mining? Subtopics on this theme are Bag of Words, Term Frequency, N-Gram sequences, relation extraction and sentiment analysis. On top of this, we will focus on Text Synthax and Structure (Part-of-Speech, Shallow Parsers, and Dependency Parsers).

→ 3 July 2020 (1 day)

Neural Nets & Deep Learning

During the last day, we will focus on neural nets and deep learning. Your instructor will give an explanation on Feedforward, Back propagation, Convolutional, Recurrent, LSTM, #Intuition and basic construction & usage. We will of course also do exercises, step by step.

Hardware & Software

At the start of the bootcamp you will receive a laptop from the BISS Institute which has all software installed. In case any additional software is needed, you will receive detailed information from your bootcamp drill sergeant. In between the modules, you can use the laptop to practice your skills by working on exercises.

The laptop will be handed over to you personally and will be your responsibility for the period it is in your care.

Your drill sergeant

Dr. Rui Jorge de Almeida studied Mechanical Engineering in University of Lisbon where he received his 5-year degree in 2005 and master's degree in 2006. He pursued a PhD at the Erasmus Research Institute of Management, part of the Erasmus University of Rotterdam. In his PhD thesis he developed new models that combine probabilistic and fuzzy uncertainty applied to financial risk forecasting. At the same time, Rui received grants to perform research visits at several French universities.

In 2013 he joined the Information Systems group of the School of Industrial Engineering, Eindhoven University of Technology, as an assistant professor. He worked as a projectleader and researcher and collaborated with industry partners. Since December 2016, Rui is a researcher in data science at BISS (Brightlands Institute for Smart Society) and an assistant professor in the Quantitative Economics department of the School of Business and Economics, Maastricht University.

Location BISS

Brightlands Smart Services Campus
Smedestraat 2, 6411 CR Heerlen

Participation rates

Training 10 days

Participation in the entire program (including Python Programming Introduction)
→ Fee for BISS partners € 3.590
→ Fee for external parties € 3.990

Training 8 days

Participation in the entire program (excluding Python Programming Introduction)
→ Fee for BISS partners € 2.690
→ Fee for external parties €2.990

Rate is VAT exempt and materials, laptop and catering are included.

Payment conditions

As participants must pay an upfront fee for the program, we kindly ask you to duly complete the payment details on the registration form. After we have received your registration form, we will send you a confirmation of participation and an invoice.

Registration

If you wish to take part in the programme, please register via: www.biss-institute.com/education/data-science-bootcamp
We will contact you as soon as possible.

Contact BISS

Brightlands Smart Services Campus
6411 CR Heerlen
E-mail: biss-secretariat@maastrichtuniversity.nl
Tel.: +31 (0)6 3656 0941
www.biss-institute.com/education