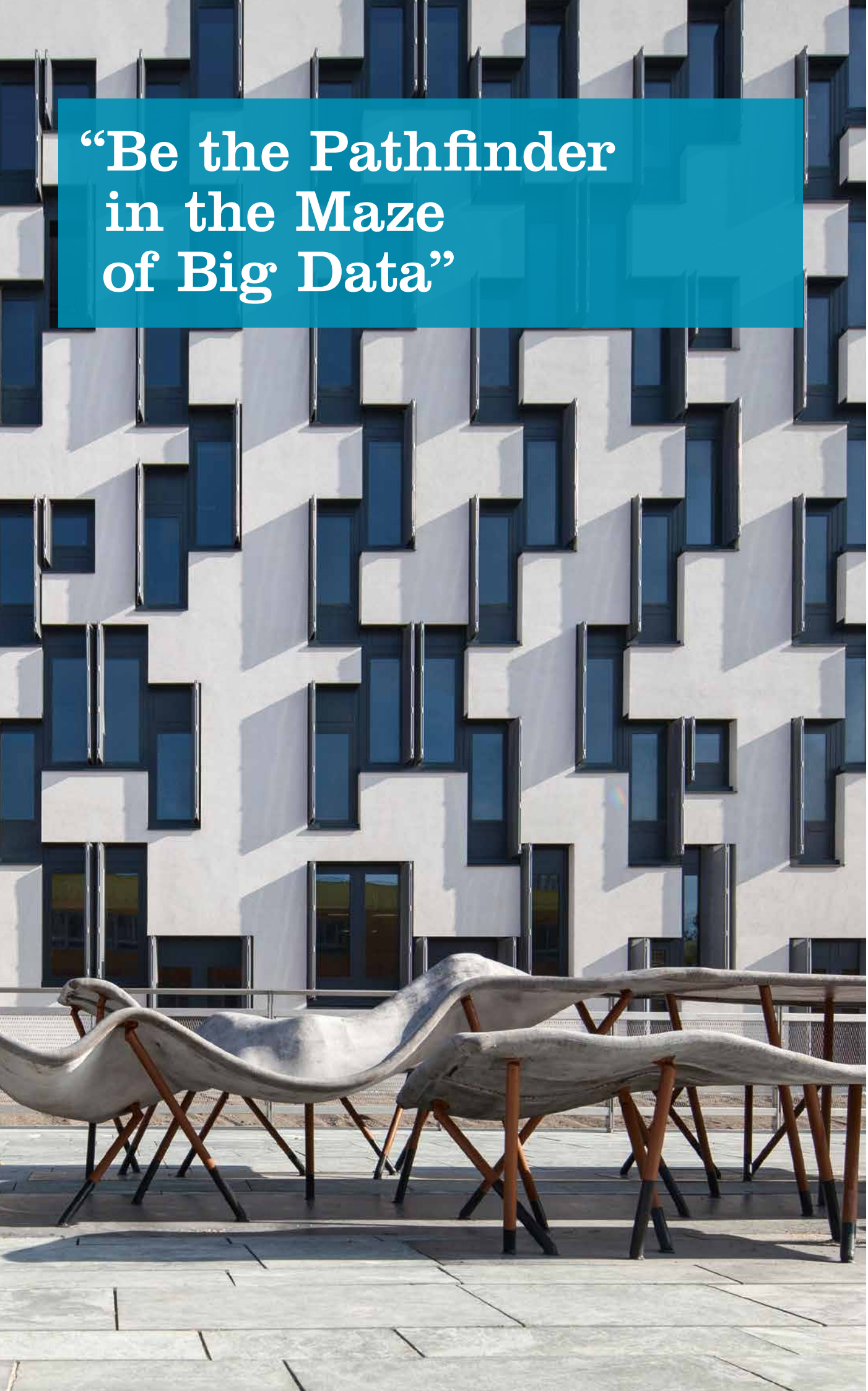
Data Science

WU EXECUTIVE ACADEMY

“Be the Pathfinder in the Maze of Big Data”



WU Executive Academy – Become a Data Scientist

Never before have businesses had such large amounts of information about their products, markets, and customers than today. While it is clear that this information is extremely valuable, managing the sheer amount of data is not easy. It therefore comes as no surprise that the emerging job of data scientist is now considered as one of the most exciting careers of the future.

THE PROFESSIONALIZATION OF A TREND

Given the ever-increasing amount of data, there is a need for experts who are capable of filtering and interpreting information. Businesses need specialists who can help them take advantage of their vast, in-house data volumes. Hence, experts capable of extracting the relevant knowledge from this data mine are more sought after than ever: Not for nothing has Harvard Business Review called data scientist the "sexiest job of the 21st century."

In response to this development, the WU Executive Academy has developed a new program which equips participants with the essential skills to master the enormous wealth of data available nowadays. Under the academic lead of Prof. Axel Polleres, they will learn how to help businesses to maximize benefits from the analysis of data and the derivation of new valuable insights as a basis for making more informed decisions.

CROSS-FUNCTIONAL PATHFINDERS

"Data Science" is designed for managers who deal with data as part of their job. They can expect to receive interdisciplinary knowledge, which will address a multitude of job functions. In addition to technical skills, data scientists primarily need a holistic understanding of application domains.

Thus, the program "Data Science" will guide you and your company into the future and provide you with the necessary knowledge and skills to be your organization's data scientist. Help your company get in the fast lane – master the big data challenge!

Barbara Stöttinger
Dean

Astrid Kleinhanns-Rollé
Managing Director

Axel Polleres

"In order to show what can be done with data, we need to 'dispel myths' by demonstrating in a hands-on manner how to work with data, what problems there are, and what is technically, and legally, feasible. Moreover, we will explore a wealth of successful real-world examples of corporate 'data science.' With our guidance, you will understand the potential you can unlock by making strategic and creative use of data."

Prof. Axel Polleres, Academic Director

Take Your Skills to the Next Level

STARTING POINT

The program does not intend to replace an IT degree. Instead, it provides business professionals with the skills and techniques to not only analyze data but also interpret it in an effective way and make sound business decisions.

THE PROGRAM IN BRIEF

In the course of three, four-day modules, data specialists will equip participants with a comprehensive theoretical and practical understanding of data science. Each module provides them with theoretical inputs as well as a hands-on project to practice using data as a basis for making better decisions. The training will cover every step of analyzing and interpreting data – from exploratory data analysis and basic data processing to modelling, validating, cleansing, visualizing, and, finally, drawing the right strategic conclusions. Participants will be working with the powerful statistics tool R and learn to use state-of the art scripting languages such as Python to quickly get their first results and to efficiently automate data processing pipelines for large amounts of data.

YOUR DATA SCIENCE PROJECT

Special emphasis will be put on ensuring that participants acquire the comprehensive know-how in a highly practical way: working on projects involving case studies from their businesses will enable the future data scientists to transfer their training to the workplace while still attending the program.

MODULE 1

What is Data Science?
Concepts & Application Domains
WU Executive Academy

- Online tutorial: R data camp
- Overview of data science concepts and the business areas they impact, such as: marketing, supply chain management, production management, process management, and finance.
- Data processing
- Data analytics
- Presentation of selected data science projects and scenarios in depth
- PROJECT ASPECT: Introduction to the team project and "meet your project coach"

MODULE 2

From Data Science to Big Data
WU Executive Academy

- Legal and ethical foundations as well as data security
- New European General Data Protection regulation
- Big data methods, algorithms, and data distribution – in theory and applied hands-on
- Data workflows and advanced techniques (e.g. semantic technologies, text extraction)
- Commercial data science tools fair
- Advanced data analytics
- PROJECT ASPECT: Data science project kick-off and development of a project proposal based on participants' own enterprises; preparation of a "data science problem pitch"

MODULE 3

Data Science in Practice and in the Future
WU Executive Academy

- Pre-module project report on legal and ethical aspects, scalability challanges application of advanced data analytics methods, etc.
- Trends and outlook on data processing and data analytics
- Application of data science on practical use cases
- Special guest talks by distinguished academic speakers and expert practitioners
- PROJECT ASPECT: Data science project presentations

Depending on the participants' progress and their needs, the detailed content of the program will be adapted "on the go" (dynamic program design). This will allow for the provision of tailored packages, so that participants can benefit from the program in the best possible way.

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Program Overview

TARGET GROUP

The program is for analysts, product managers, business managers and anyone who wants to optimize their decision making finesse through data science. Participants come from a wide range of functions and industries including:

- Marketing, CRM, Business Analysis, Market Research
- Consulting
- Industry, Supply Chain Management, Manufacturing
- Health Care, Pharma
- Technology, IT, Telecommunications
- Consumer Goods
- Finance, Insurance

DURATION

- 4 months, part-time
- 3 blocked modules of 4 days each (Wednesday–Saturday)

PROGRAM LANGUAGE

English

LOCATION

Vienna, Austria
Campus WU (WU Executive Academy)

CERTIFICATE

You will receive a university certificate from the WU Executive Academy, which certifies your participation and notes your course performance.

Successful participation of each of the three modules as well as the completion of your team project are the prerequisites for receiving the certificate. The biggest merit, however, will be what you personally take away and how you individually develop within the course.

STRUCTURE

During the modules, teaching usually takes place every day from 8:30 am to 5:30 pm at the WU Executive Academy. Between the modules, you will be working on your data science projects, which can become a team project. Coaching from experienced WU faculty will help you achieve the best possible outcome.

MBA UPGRADE OPTION

The program is eligible for credit transfer as part of an upgrade to an MBA degree program of the WU Executive Academy. Contact the staff for all details.

PARTICIPATION REQUIREMENTS

Participants need to have three years of work experience and a good command of English as this is the language of instruction.

REGISTRATION

To register for the program, please use the online form at:
www.executiveacademy.at/datascience

FACULTY

- **Axel Polleres**
  (Academic Director)
  Professor and Head of the Institute for Information Business, WU Wien
- **Andreas Mild**
  Associate Professor and Deputy Head of the Institute for Production Management, WU Wien
- **Thomas Reutterer**
  Professor and Head of the Institute of Service Marketing and Tourism, WU Wien
- **Alfred Taudes**
  Professor at the Institute for Production Management, WU Wien
- **Ronald Hochreiter**
  Managing Director, Quant4Market
  Lecturer at the Institute for Statistics & Mathematics, WU Wien
- **Sabrina Kirrane**
  Assistant Professor at the Institutes for Management Information Systems & Operations and Information Business, WU Wien
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  Assistant Professor at the Institutes for Management Information Systems & Operations and Information Business, WU Wien
- **Claudio Di Ciccio**
  Assistant Professor at the Institutes for Management Information Systems & Operations and Information Business, WU Wien
- **Elena Simperl**
  Professor of Computer Science in the Web and Internet Science research group, University of Southampton, UK
- **Michael Platzer**
  Data Scientist and Founder of the AI Summit Vienna

REGISTRATION

executiveacademy.at/datascience

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"As a university, we take a keen interest in the professionalization of jobs, and this is also true with regard to modern careers such as data scientist. While the practical relevance of data science is undisputed, the field has yet to establish itself as a new sphere of work in society."

Prof. Barbara Stöttinger
Dean of the WU Executive Academy

Information and contact

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wu.ac.at

Arriving by public transport:
Subway: U2 stations “Messe-Prater” or “Krieau”
Bus: 82A, “Südportalstraße” stop