Big Data: Data Science and Business Analytics

5th Edition - 2021

Module	Faculty	Format	Month	Day	Week Day	Schedule
Program Opening (1h)	Miguel Godinho de Matos	In-person classes	April	9	Friday	17h00 - 18h00
Environment Setup and Configuration (1h)						18h00 - 19h00
Overview of Big Data, Data Science and Business Analytics (2h)						19h00 - 21h00
Introduction to R Statistical Programming (4h)				10	Saturday	09h30 - 13h30
Big Data Tools Ecosystem (3h)	Rodrigo Belo			15	Thursday	17h00 - 20h00
Big Data Tools Hands-On (4h)				16	Friday	17h00 - 21h00
R for Business Analytics Hands-On Part I (4h)				17	Saturday	9h30-13h30
Review of Statistical Analysis with Applications in R (2h)	Miguel Godinho de Matos			22	Thursday	17h00 - 19h00
Descriptive Statistics and Visualization of Large Datasets (2h)						19h00 - 21h00
Basic concepts of Data Mining, Machine Learning, Supervised and Unsupervised Learning (1h)				23	Friday	17h00 - 18h00
Supervised Learning for Predictive Analytics in Business Applications (3h)						18h00 - 21h00
R for Business Analytics Hands-On Part II (4h)	Rodrigo Belo			24	Saturday	09h30 - 13h30
Building our First Predictive Model	Miguel Godinho de Matos		May	6	Thursday	17h00 - 21h00
Model Fit, Over Fit and Performance Evaluation (4h)				7	Friday	17h00 - 21h00
Advanced Topics (4h)				8	Saturday	09h30 - 13h30
Data Science Team Work (3h)				13	Thursday	17h00 - 20h00
Causality, Correlation and Unobserved Effects (4h)	Pedro A. Ferreira			14	Friday	17h00 - 21h00
Causality in Observational Data Part I (5h)				15	Saturday	08h30 - 13h30
Causality in Observational Data Part II (3h)				20	Thursday	17h00 - 20h00
Randomized Experiments (3h)						20h00 - 21h00
Case Studies (6h)	Miguel Godinho de Matos			21	Friday	17h00 - 19h00
	Pedro A. Ferreira					19h00 - 21h00
				22	Saturday	09h30 - 13h30
Data Science Team Work (3h)	Miguel Godinho de Matos			28	Friday	17h00 - 20h00
Closing Ceremony			**May**			

Duração Total
70H

Directors

Miguel Godinho de Matos

Miguel received both a Ph.D. in Telecommunications Policy and Management and a M.Sc. in Engineering and Public Policy from Carnegie Mellon University.
Associate Professor of Information Systems and Management at Católica Lisbon School of Business & Economics. He is also a visiting research scientist at the Heinz College from Carnegie Mellon University.
Miguel's work has been accepted for publication in top journals such as Marketing Science, Management Science, Information Systems Research, Management Information Systems Quarterly, and the Journal of Management Information Systems. Miguel is also a regular presenter in top peer-reviewed research conferences such as the International Conference of Information Systems, the Economics of Digitization Seminar Series of the National Bureau of Economic Research, and the Conference on Digital Experiments at MIT.

Pedro Ferreira

PhD in Telecommunications Policy and Management from Carnegie Mellon University and a Master in Electrical Engineering and Computer Science from the Massachusetts Institute of Technology (MIT).
Associate Professor of Economics of IT and Public Policy at the Heinz College and at the Department of Engineering and Public Policy, Carnegie Mellon University (US).
Pedro Ferreira works regularly with major telecommunications firms in Europe, Asia and in the US, in consulting projects focusing on using social media for viral marketing and for active churn management.
Prior to joining academia Pedro served as Director of the Portuguese Knowledge Society Agency supervising all public investment in ICTs between 2005-2010.
He also worked as a post-doctoral fellow at the School of Information, University of California, Berkeley.