Data Analytics and Python Programming (SEU) - Summer School 2024 on campus

Week 1	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Date	28 July	29 July	30 July	31 July	01 August	2 August	3 August
08:00-08:30	Collective arrival			Standard Data Structures: Lists, Dictionaries, Tuples, Sets. Differences and manipulation, Comprehensions, Nested Data Structures, Exceptions, Input-Scanner, Debugging			Free time for excursions, sight-seeing and self-study
08:30-09:00							
09:00-09:30			Introduction to Programming: Algorithms, Python basic data types (int, string, bool), math operations, conditionals, and loops		Introduction to Data Analytics	Data Preperation: Data Cleaning	
09:30-10:00							
10:00-10:30		Pick-up					
10:30-11:00		Welcome Orientation			Data Analytics Libraries (Dependencies): Pandas, Numpy and matplotlib		
11:00-11:30							
11:30-12:00							
12:00-12:30		Lunch Break at Mensa Vita					
12:30-13:00							
13:00-13:30							
13:30-14:00		Get-to-know Aachen City Rally	Object Oriented Programming	File handling with python: JSON, txt and csv. Structured and unstructured Data Types	Case Study / Group Work	Data Visualization and Exploration	
14:00-14:30							
14:30-15:00							
15:00-15:30			Functions, Constructors, Classes	Case Study / Group Work	Self-Study		
15:30-16:00							
16:00-16:30							
16:30-17:00							
17:00-17:30							
17:30-18:00							
18:00-18:30				Barbeque			
18:30-19:00							
19:00-19:30							
19:30-20:00							
20:00-20:30							
20:30-21:00							

INTERNATIONAL ACADEMY | RWTH AACHEN UNIVERSITY

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Week 2	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Date	04 August	5 August	6 August	7 August	8 August	9 August	10 August
08:00-08:30	Free time for excursions, sight-seeing and self-study						Collective departure
08:30-09:00							
09:00-09:30		Data Transformation	Artifical Neural Networks and other models	City Excursion to Maastricht, The Netherlands			
09:30-10:00							
10:00-10:30						Farewell Event	
10:30-11:00		Data Representation: Feature selection and extraction			Preperation for Exam		
11:00-11:30							
11:30-12:00							
12:00-12:30		Lunch Break at Mensa Vita			Lunch Break at Mensa Vita		
12:30-13:00							
13:00-13:30							
13:30-14:00		Data-driven Learning: Supervised, Unsupervised and Reinforcement Learning	Further Research: State of the Art application areas of AI / Data Analytics		Final Exam	Return of Cards	
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