







Spinaker 2026 – edition I (8 June to 21 June)

	Day	Date	Time	Class	Subject	Description	Coach
Module 0	-	Before main course start	No time schedule (max 60 hrs total)		Introduction to R **(online)**	Trainers will prepare instructional videos, tasks, quizzes that will allow students to familiarize themselves with the programs and test their knowledge. Students will be required to complete a test and possibly additional training (depending on the test result) before participating in the summer school.	**Maria Kubara, PhD**
	-				Introduction to Python **(online)**		**Ewa Weychert, PhD**
Week 1	1	June, 8 (Mon)	09:00-10:30 10:45-12:15 12:30-14:00 (6 hrs total)	A102	Introduction to AI	Introduction to AI, creating correct scripts, ethical principles, problems, advantages, using various tools e.g. ChatGPT, Gemini, AI as an assistant in analytical work.	**Katarzyna Kopczewska, PhD, DSc, Professor** **Maria Kubara, PhD**
	2	June, 9 (Tue)	09:00-10:30 10:45-12:15 12:30-14:00 (6 hrs total)	A102	Advanced R Programming	Advanced programming in R, object-oriented programming, creating your own functions and packages, implementation of the most important machine learning models and statistical methods in R.	**Katarzyna Kopczewska, PhD, DSc, Professor** **Maria Kubara, PhD**
	3	June, 10 (Wed)	09:00-10:30 10:45-12:15 12:30-14:00 (6 hrs total)	A102	Advanced Python Programming	Advanced Python programming, object-oriented programming, creating advanced functions and scripts, implementation of the most important machine learning models and statistical methods in Python (also discussion of the basics of unsupervised machine learning - clustering, and supervised - neural networks, random forest, XGBoost, etc.).	**Ewa Weychert, PhD**
	4	June, 11 (Thu)	09:00-10:30 10:45-12:15 12:30-14:00 (6 hrs total)	A102	AI in Business, part 1	Analysis of AI applications in project management and decision-making, with a focus on risk, resource and budget management, and practical case studies demonstrating the opportunities and challenges of AI integration, including ethical and data protection aspects.	**Umair Ashraf Rana, PhD** **Bartłomiej Dessoulavy-Śliwiński, PhD**
	5	June, 12 (Fri)	09:00-10:30 10:45-12:15 12:30-14:00 (6 hrs total)	A102	AI in Business, part 2		**Umair Ashraf Rana, PhD** **Bartłomiej Dessoulavy-Śliwiński, PhD**
Week 2	6	June, 15 (Mon)	09:00-10:30 10:45-12:15 12:30-14:00 (6 hrs total)	A102	Explainable AI (XAI)	Explainability of AI models in the context of increasing transparency requirements – a review and implementation of methods to increase the understandability of "black-box" models, with particular emphasis on applications in medical data analysis and their specificity.	**Marcin Chlebus, PhD**
	7	June, 16 (Tue)	09:00-10:30 10:45-12:15 12:30-14:00 (6 hrs total)	A102	AI in Spatial Data	Application of artificial intelligence in spatial data analysis – modeling spatial relationships between geographically close observations, growing importance of location data (including from phones, e-commerce, logistics), need to integrate AI with spatial statistics and econometrics methods in order to adapt the analytical approach.	**Piotr Wójcik, PhD, DSc, Assoc. Prof.**
	8	June, 17 (Wed)	09:00-10:30 10:45-12:15 12:30-14:00 (6 hrs total)	A102	AI in Finance	Application of AI in assessing the situation of enterprises and financial institutions, review of analytical tools and practical workshops on financial data analysis from an interdisciplinary perspective.	**Małgorzata Sulimierska, PhD, Assoc. Prof.** **Agata Kocia, PhD**
	9	June, 18 (Thu)	09:00-10:30 10:45-12:15 12:30-14:00 (6 hrs total)	A102	AI in Investments	AI in investments, implementation and use of high-frequency time series analysis methods, investment portfolio management, investment valuations, etc.	**Robert Ślepaczuk, PhD, DSc, Assoc. Prof.**
	10	June, 19 (Fri)	09:00-10:30 10:45-12:15 12:30-14:00 (6 hrs total)	A102	Large Language Models, AI for Text Data	Application of AI in text data analysis and construction of large language models – extraction of information from customer opinions, statements and surveys, creation of chatbots and contact automation tools, understanding text modeling as the basis for the operation of modern AI systems.	**Jacek Lewkowicz, PhD, DSc, Assoc. Prof.** **Karolina Kuligowska, PhD**

