Universität Hamburg
DER FORSCHUNG | DER LEHRE | DER BILDUNG

Univ.-Prof. Dr. Mark Heitmann

Fakultät für Betriebswirtschaft
Lehrstuhl für Marketing & Customer Insight
Institut für Marketing
Moorweidenstraße 18
20148 Hamburg

Tel. +49 (0)40 - 42838 -8676
Fax +49 (0)40 - 42838 -8743
customer-insight.bwl@uni-hamburg.de
www.bwl.uni-hamburg.de/ci.html

Master-Seminar

Driven by Data: Leveraging Artificial Intelligence in NOVA Business School's Racing Simulation

(Univ.-Prof. Dr. Mark Heitmann, summer semester 2025)

Goal

Students learn how to use AI tools and the Python programming for the purpose of advanced data analysis in a gamified context. Seminar participants will be able to extract valuable insights from large data, learn programming using Python, and the application of modern AI tools. They will also train teamwork, as well as presentation skills.

Contents

In this seminar students will form groups of 3 people to build racing teams in a simulated car racing championship. The simulation is developed by Pedro Gardete who teaches about data analytics and marketing at the renowned NOVA business school in Lisbon (ranked top 15 in business schools worldwide – Financial Times).

Each group receives a challenging data set at the beginning of the seminar. During the following 6 weeks you need to develop your data analysis skills to perfect the settings of your race car to win championship races. During this process we will introduce you to python programming as well as state-of-the-art artificial intelligence models that will help you optimize your racing performance by doing advanced data analytics. Learnings of each team are presented during a final group presentation.

Find the fastest car configurations and win the Grand Prix races by learning state-of-the-art to program state-of-the-art AI tools using Python programming. Let the fastest team win!

Process

Contact person	Maximilian Witte Or supervisor of the seminar paper
Applicability	Compulsory seminar in the specialization "Marketing", free elective area or general business administration (module code MA-MAMA 5)
Semsester hours per week and credit points	2 SWS, 6 credit points
Language	English
Participation requirements	- Participation in all live seminar dates is mandatory - Allow for 1-2 hours of time each Friday afternoon in November (Races are held every Friday in November) - Interest in teamwork (seminar done in groups of 3 people) - Interest in wanting to learn about Artificial Intelligence and programming (no prior experience in programming needed)
Examination performance	50 % final presentation, 20 % programming code during seminar, 30 % racing performance (percentages might be adjusted slightly to ensure fair seminar) (all examinations must be passed)
Seminar paper	Group work (usually 3 persons, approx. 10 pages per person). Please follow the chair's instructions for scientific work, as they also apply to final theses.
Seminar presentation	Group presentation (usually 3 people, approx. 10 minutes per person, grading for presentation individually)
Dates	Kickoff: 03.04.2025, 16:00-19:00 Feedback session 1: 11.04.2025, 16:00 – 18:00 Feedback session 2: 25.04.2025, 16:00 – 19:00

	Block seminar (1): 16.05.2025, 16:00 – 20:00 Block seminar (2): 17.05.2025, 09:00 – 18:00 Block seminar (2): 18.05.2025, 09:00 – 18:00
Registration	via STiNE