Solvay Brussels School
Economics & Management

AMFM-2425-517-Artificial Intelligence

Name of lecturer(s) & Email	Level/Semester, Status, Timing	ECTS*, CH & SDL**
Patrice LATINNE patrice.latinne@solvay.edu	Semester 2 Compulsory Timing was unavailable at the time of issue	Data unavailable 12 Data unavailable

Description of the course

The course aims to provide a practical introduction to modern applications of Artificial Intelligence in the financial markets industry. Based on a selected set of real-world case studies, the course will deep dive how AI systems have been built and used by several companies to transform themselves, what were their lessons learned and their roadmap. Students will be actively working on the case studies to put themselves in the shoes of some roles played by the companies so that they can grab the core of the actual implementation phases with a focus on strategy, people, business, data and risks - more than the focus on pure technology or technical elements (that will still be addressed by some illustrative demonstrations and description of fundamental base learning algorithms along the case studies)

Course units

- Unit 1: Introduction to case studies: why they matter in the whole FM industry? a solid framework for managing and deploying AI capabilities in financial markets
- Work on case study 1: classic and generative AI for financial crime
- Work on case study 2: chatting with legal and compliance documents
- Work on case study 3: investment portfolio storytelling: processing text, speech and video

Course Learning Outcomes (CLOs)

1. Understand how Artificial Intelligence is applied today to Financial Markets in Europe (with links made with other AMFM courses) .
2. Learn what is Artificial Intelligence in practice by studying various case studies achieved recently by Financial Markets organizations.
3. Learn the essential of an Artificial Intelligence project end-to-end and what is a modern AI system (without entering the technical details): strategy, governance, development lifecycle, risks, standards and regulations.
4. Analyze how to identify and design how some financial markets processes can be transformed using Artificial Intelligence or not.

Prerequisite (if any)

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Contribution to Programme Learning Objectives (PLOs)***

- Learning Objective 1.1: Mastery
- Learning Objective 2.1: Reinforcement
- Learning Objective 3.1: Reinforcement
- Learning Objective 4.1.: Mastery
- Learning Objective 5.1: Mastery

Evaluation scale

0-20

Main Teaching methods used in the course

Lecture, Case-based learning, Problem-based learning, Role plays and simulation

Contribution to the Environmental, social and governance (ESG)

Course Contribution to ESG: No
Contact Hours are dedicated to ESG: /
Contact Hours containing climate solutions for how organisations can reach net zero: /
Description of contribution: /

Notice: The information available in the course outline is subject to change. Please keep yourself informed at all times by regularly checking Canvas.

*ECTS - European Credit Transfer and Accumulation System (1 ECTS = 30 hours of learning)
**CH - Contact Hours in class or online, SDL - Self-Directed Learning including readings, homework, group work, preparation to assessment, etc
***PLO - Programme Learning Objectives are available on the curriculum page

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Assessment methodology / Learners Use of Time and Load

Presentation of a capstone project along one original case study

- weight 50%
- workload estimated = 20 hours
- due 20-03-25
- Guidelines: Presentation of the capstone project - minimum 10 slides that illustrate the holistic evaluation of the case study along the various dimensions discussed in the course: strategy, possible solution(s) and development, data requirements, risks, next steps

Presentation of the capstone project in front of the audience

- weight 50%
- workload estimated = 10 hours
- due 20-03-25
- Guidelines: Based on the prepared powerpoint presentation, present the case study with respect to a given role in the project setup, answer to questions.

Readings

Required
The AI Product Manager's Handbook: Develop a product that takes advantage of machine learning to solve AI problems
Irene Bratsis

Recommended
Machine Learning & Data Science Blueprints for Finance by Tatsat et al. (pdf version will be provided to the students). This book provides a good business overview of case studies and, if the student is interested in, the necessary technical implementation details. This book complements the book "the AI product manager's handbook" as it enters in more details about the scientific field of AI itself. While it doesn't address generative AI systems yet (which may sound like it is obsolete), this book provides good foundations.

Other Learning Materials

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