

Detailed Course Information: AI Ethics

Sl. No.	Data Type	Comments
1	Course Name	AI Ethics as Market Differentiator
2	Content Source	S2E book from Bee-Relevant founders and presentations/publications of Dr. Chris Grumiau
3	Brief Description / Introduction of Course	<p>The goal of this course is to debunk the myth about AI Ethics. The course presents the history of AI and Ethics and discusses many examples of failures to establish why this topic is extremely critical and relevant today.</p> <p>It leads us to the current definition and regulations about AI Ethics and the introduction of frameworks helping companies to operationalize it as per design.</p>
4	Why do we need this course?	<p>AI Ethics is a highly debated topic both from practitioners and non-practitioners of AI. And as with all new innovative topics in the world, it starts with bad press. The goal of this course is to illuminate the myth. Of course, there are cases of implementations gone wrong like explained for example by the New-York times, for a project where the accuracy of facial recognition was effective only for faces with one type of skin color. But let's remember that AI is still a topic in constant evolution and that all this fear about AI is mainly due to misunderstanding of its own purpose. We need this course to set up the scene and to explain the current limit of AI and the current limit of the regulation. It is the only way to avoid you become the next example of the New-York Times.</p> <p>AI Ethics is an opportunity!</p> <p>This course is for executives, data product managers and any individuals aiming to join the data world field. It is a non-technical course.</p>
5	Learning Outcomes	<ul style="list-style-type: none"> • <i>Introduce the notions of Artificial Intelligence (AI), Machine Learning (ML), Deep Learning (DL) and Data Science (DS)</i> • <i>Provide an history of the evolution of AI, ML, DL and DS; and a perspective of future evolution</i> • <i>Introduce the notion of Ethics</i> • <i>Provide real life examples of success stories and failures around AI Ethics</i> • <i>Presentation of the regulation around AI and data (worldwide) – e.g., the Singapor paper, GDPR or the anti-discrimination law</i> • <i>Presentation of the regulation around data with a specialisation in the financial sector – e.g., Solvency II or Basel IV</i>

		<ul style="list-style-type: none"> • <i>Presentation of a framework to be applied per design to cover the AI Ethics regulatory requirements without impacting the company growth and competitiveness</i> • <i>Data workforce and its impact on AI Ethics is studied</i> • <i>Definition of risk management and its impacts/needs</i> • <i>Real examples about human control, risk based approach, interpretability and monitoring</i>
6	Course Length	<i>4 Modules</i>
7	Estimated Effort	<i>2-3 hours/module (including homeworks and Q&A sessions)</i>
8	Prerequisites	<i>None</i>
9	Skills Acquired:	
	Module 1: Introduction to AI Ethics	Vocabulary around AI, ML, DL, DS and Ethics; history of AI, ML, DL, DS and Ethics
	Module 2: Regulation	Impact of AI Ethics on business, regulation
	Module 3: Solution per design	AI Ethics per design (framework), risk management and effective workforce
	Module 4: Use cases	Risk based approach, how to treat transparency and fairness

Module 1: Introduction to AI Ethics

Lecture	Video Name
Lecture 1	Welcome to Module-1
Lecture 2	Definition of AI, ML, DL and Data Science
Lecture 3	History of AI
Lecture 4	Definition of AI Ethics and history
Lecture 5	Wrap up
Key Terms	<i>AI, ML, DL, DS, Ethics, history and values</i>

Module 2: Regulation

Lecture	Video Name
Lecture 1	Introduction to module
Lecture 2	Why do companies care about Ethics?
Lecture 3	Real-life impacts of AI Ethics
Lecture 4	Real-life cases
Lecture 5	Regulation (worldwide)
Lecture 6	Regulation in the financial sector
Lecture 7	Wrap up
Key Terms	<i>Regulation, anti-discrimination, GDPR, fairness, UNESCO recommendation, Solvency II, Basel IV, IFRS17</i>

Module 3: Solution per design

Lecture	Video Name
Lecture 1	Introduction to module
Lecture 2	General framework/Risk based approach
Lecture 3	From transparency to accountability
Lecture 4	Risk management
Lecture 5	Effective workforce
Lecture 6	Wrap up
Key Terms	<i>CRISP-DM, Way of working, Agile, risk based approach, transparency, human agency, fairness, risk management, organizational intelligence, dynamic capability,</i>

Module 4: Use cases

Lecture	Video Name
Lecture 1	Introduction to module
Lecture 2	Risk based approach
Lecture 3	Transparency example
Lecture 4	Fairness example
Lecture 5	Wrap up
Key Terms	<i>Risk based approach in the insurance sector (disability health), transparency example for a lapse case, fairness example about gender discrimination in corporates</i>