Data and business insights

ECTS : 3

Volume horaire : 18

Description du contenu de l'enseignement :

Course Objectives:

1. Learn how data and datafication shape business models, production of services and goods as well as policies and the functioning of societies.

2. Learn to exploit data and produce a relevant storyline based on its visualization and processing on Tableau.

3. Take a critical stance on data usage by and in organizations. Understand avenues for organizations to tackle its inherent challenges.

The data project:

Throughout the course, the students will complete a collaborative study based on data visualization. The students will gather by teams to complete this project.

In a nutshell, each team identifies a practical issue and infers from it a question it wants to address in the project. Then the teams collect the necessary data to address the question. After importing the data on Tableau, each team provides answers to the question but relying on visuals produced from the data. Each visual should be justified and explained. Also, the insights from each visual should be detailed.

In the project, the teams also reflect on the issues that challenged their work, including data collection and cleaning, the production of visuals and their refinement, the limitations of their reasoning based on data.

To produce the report, each team will submit and review assignments, produce and review a video, produce a report.

The teams will receive feedback:

- From their peers, through iterative assignments (the feedback will be accessible on Peergrade)

- From the instructors, during each class session and through Peegrade. The students will also benefit from online coaching.

- From their peers and the instructors, during the final session. The whole class will collaboratively help the teams to refine the project after watching the video. The students should take into consideration feedback at every stage of their work, including during the production of their report.

Pedagogical requirements:

The course is based on a learning-by-doing principles. It requires continuous involvement and regular teamwork. There is no final exam in this course, but each team has to produce a final report that synthesizes the team's advances on a specific issue, based on their visualization of data sets.

Brain attendance to the course is compulsory. The course involves online coaching (after session 5), which requires proactivity from the students.

All the documentation is provided on Moodle and will NOT be sent by email.

Compétence à acquérir :

- **Identify and collect data:** identify sources of data, distinguish diverse types of data, understand the licenses inherent to data, extract data and prepare data for analysis.
- **Analyze data**: clean, format data, choose an adequate method to process data.
- **Represent and visualize data:** Use Tableau as a visualization tool and produce relevant visuals, select the best visuals.
- **Provide insights from data:** identify and narrate insights from data and address burning questions with data, different question from practical issues.
- **Collaborate in a project**: collaboratively produce insights from data, receive feedback and integrate feedback in the completion of the project.

Mode de contrôle des connaissances :

Contribution to debates and discussion (individual): 25% Quality of peer reviewing of assignments (team): 25% Data project video (team): 20% Data project report (team): 30%

Bibliographie, lectures recommandées :

Les ouvrages et articles suivants vous permettront d'approfondir certains aspects du cours - Brynjolfsson E., McAfee A., (2012), « Race Against the Machine: How the Digital Revolution is Accelerating Innovation, Driving Productivity, and Irreversibly », Digital Frontier Press, 100 p. - Chignard S., Benyayer L-D., (2015), « Datanomics Les nouveaux business models des donne´es », FYP Editions, 192 p. - Chignard S., Marchandise J-F., (2012), « L'Open data : Comprendre l'ouverture des donne´es publiques », FYP 192 p. - Gouiguoux J-P., (2016), « Open Data - Consommation, traitement, analyse et visualisation de la donne´e publique », Editions ENI, 580 p. - Kober V. (2017), « Open data - Ouverture, exploitation, valorisation des donne´es publiques », Territorial E´ditions, 136 p. - O'Neil C., (2016), "Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy, Crown, 272 p. - Shirky C., (2008), "Here Comes Everybody: The Power of Organizing Without Organizations", Penguin Press, 336 p. - Tapscott D., Williams A.D., (2007), "Wikinomics: How Mass Collaboration Changes Everything", Portfolio, 324 p. - Shapiro, Carl, Varian, Hal R. (1999), "Economie de l'information, Guide strate´gique de l'e´conomie des re´seaux", Bruxelles, De Boeck Universite´. - Verdier C., (2016), « E´tat des lieux et enjeux de l'Open Data », E´ditions universitaires europe´ennes, 64 p.

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