# Data Science for Communication with Pitching Public Speak

## Prof. Gaia Amadori & Prof. Giulia Magaldi

***COURSE AIMS AND INTENDED LEARNING OUTCOMES***

*Part 1* (*Data Science for Communication*)

Data and data analysis are playing an ever increasing large role in our everyday life. Consequently, data science is one of the fastest-growing disciplines with applications in various fields, including communication. This course aims to introduce the students to data science combining theory and practice. Core principles, methods, technologies and contextual critiques will be presented to better frame the entanglements between data science and communication.

*Part 2* (*Pitching Public Speak,* dr. Giulia Magaldi)

Students will learn how to visually shape data and information in a compelling and comprehensive way to target a larger audience. We will learn how to develop data driven business presentations. This second part will be focused on analyzing outstanding data visualization examples, as well as crafting a project using the knowledge acquired in the first part of the curriculum.

***COURSE CONTENT***

The *first part* (*Data Science for Communication*) explores the pillars of data science, addressing the main frameworks, methods and techniques applied to marketing, communication and other relevant social spheres. In particular, this part will cover the data science life cycle and its epistemological and political implications. For this purpose, exemplary case studies will be outlined to identify best practices as well as shady zones and ambiguities.

In the *second part (Pitching Public Speak,* dr. Giulia Magaldi)we will take a closer look at data visualization projects that won prestigious awards. We will also analyze different kinds of presentations created everyday inside advertising agencies. Finally, students will be asked to work on some simulations. These exercises will then help them to prepare the presentation of the project work for the final exam.

***READING LIST***

*Part 1* (*Data Science for Communication*)

*Mandatory readings:*

* Jo Bates, Big data and data analytics, *The Routledge social science handbook of AI.* Routledge, 281-294, 2021.
* Ann Keller, Stephanie S. Shipp, Aaron D. Schroeder, and Gizem Korkmaz . Doing Data Science: A Framework and Case Study, *Harvard Data Science Review*, 2020 (<https://hdsr.mitpress.mit.edu/pub/hnptx6lq/release/10>)
* Catherine D'Ignazio, Lauren F. Klein, *Data Feminism,* The MIT Press, 2020 (chap. 1-2-4-6)

*Suggested readings*:

* Kelleher, John D., and Brendan Tierney. *Data science*. MIT Press, 2018.

All readings are accessible through the UCSC Opac or open-access repositories. Eventual additional bibliography will be published on Blackboard.

Examples, notes and presentations will be shared on BlackBoard.

*Part 2* (*Pitching Public Speak,* dr. Giulia Magaldi)

*Suggested readings*:

* Giorgia Lupi, Stefanie Posavec, Maria Popova, *Dear Data,* Princeton Architectural Press e Particular Books, USA e United Kingdom, 2016.
* Marty Neumeier, *The Designful Company: How to Build a Culture of Nonstop Innovation*, New Riders Pub, Portland, 2008.
* Catherine D'Ignazio, Lauren F. Klein, *Data Feminism,* The MIT Press 2020.
* Brown, A. (2007). *A Segmentation Model for Performing Arts Ticket Buyers.* WolfBrown.
* Deloitte 2023 *Digital media trends survey:* <https://www2.deloitte.com/us/en/insights/industry/technology/digital-media-trendsconsumption-habits-survey.html#read-the-report>
* Taylor, M. (2016). *Nonparticipation or different styles of participation? Alternative interpretations from Taking Part.* Cultural Trends, 25(3), 169–181.

Examples, notes and presentations will be shared during this part of the class.

***TEACHING METHOD***

*Part 1* (*Data Science for Communication,* dr. Gaia Amadori): theoretical frontal sessions drawing upon case studies. Students are expected to develop practical-operational, critical and analytical skills concerning data science projects.

*Part 2* (*Pitching Public Speak,* dr. Giulia Magaldi): practical sessions in which students will have to create their own data driven business pitches. This task will come after:

- analyzing international examples that have been awarded in important advertising award events, as well as day to day projects;

- simulate data visualization projects.

Some of these classes will be held in person and some remotely.

***ASSESSMENT METHOD AND CRITERIA***

The final exam will be divided in two parts, one for each module of the course.

*Part 1*

For the first part (prof. Amadori) the exam will consist of two steps:

1. a paper (70% of part 1 evaluation) in which the students will be asked to apply the main data science concepts and methods presented in class to an agreed topic.
2. a few oral questions (30% of part 1 evaluation) to assess students’ understanding and ability to apply course content and the reading material.

The paper must be submitted two weeks before the exam date, while the oral examination will be conducted on the exam day.

*Part 2*

For the second part (prof. Magaldi) the exam will consist in a project work and an oral exam in which the students will represent visually their findings developed during Part 1. The presentation of the work will be done by using the skills acquired in the second part of the course.

*Final Assessment*

In the final assessment, the following criteria will be taken into consideration: (a) clarity and completeness of the paper and the presentation; (b) level of the analytical and practical skills learnt during the class; (c) ability to appropriately link topics that have been addressed in different parts of the course; (d) relevance of answers to the questions.

Both the lecturers will evaluate each student in relation to the two parts of the program: the final grade will be only one, based on a weighted average of the two scores: Part 1 (*Data Science for Communication*) will weigh 80% and the Part 2 (*Pitching Public Speak,* dr. Giulia Magaldi) 20%.

***NOTES AND PREREQUISITES***

Students will have to understand, write and speak English; they will need basic knowledge of the computer; and they will have to be familiar with spreadsheet software (such as Excel or Google Sheets), PowerPoint, or Google Docs.

Data Communication and Society course (Prof. Matteo Tarantino, 1st semester) is considered preparatory to the lessons. Alternatively, students who didn’t include this course in their degree curriculum are required to attend Data Communication and Society Applied Classes (available on Blackboard) from lessons 1 to 14.

Due to the structure and content of class activities, students should use their notebook during lessons.

Students who are, for ascertainable and curricular reasons, unable to regularly attend the lessons will have to contact the lecturers at the beginning of the semester to identify a possible supplementary exam program.

*Office hours*

Dr. Gaia Amadori will preferably attend students on Microsoft Teams, and appointments need to be scheduled in advance.

Dr. Giulia Magaldi will only attend students on Microsoft Teams, and appointments need to be scheduled in advance.