



Bachelor of Science in Artificial Intelligence

WEB AND SOCIAL NETWORK SEARCH AND ANALYSIS

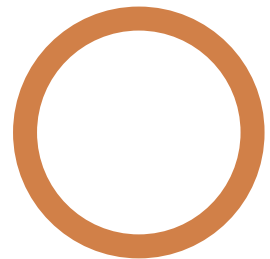
Prof. **Marco Viviani**
marco.viviani@unimib.it

The slide features a light gray background with decorative geometric elements in the corners. The top-left corner has a dark blue shape with white cutouts and a yellow shape with a small pink circle. The top-right corner has a yellow shape with a small pink circle and a small yellow circle. The bottom-left corner has a light pink shape with a yellow shape and a small pink circle. The bottom-right corner has a yellow shape with a small pink circle and a small yellow circle.

00. PROJECT INSTRUCTIONS




1. SOCIAL MEDIA ANALYSIS





GENERAL INFORMATION




- 
- Groups of 2, (max) 3 participants.
 - Given a **topic** (*keyword* and/or *hashtag*) or **known users** of your choice:
 - Define the **objective** of the analysis (what do we want to do?).
 - **Collect** data (text, network-related, metadata, ...).
 - **Analysis**:
 - Network Analysis (e.g., measures of centrality, community detection, ...).
 - Content Analysis (e.g., sentiment analysis, emotion analysis, NER, ...).
 - **Visualization**





SOME EXAMPLES (1)



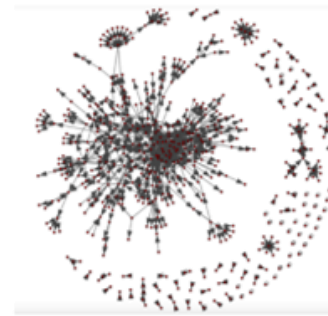
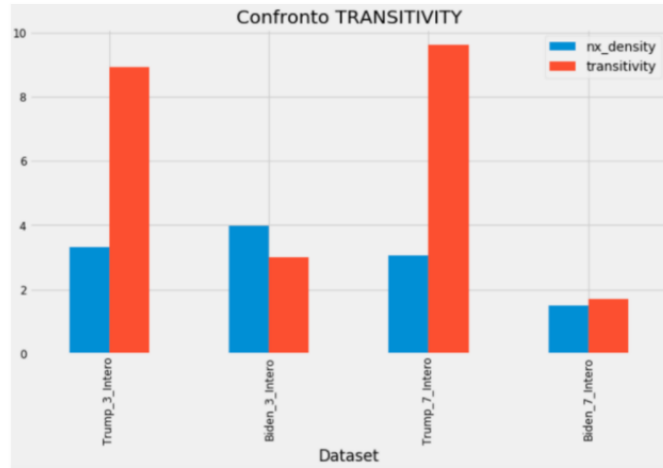
- 
- Just to give you an idea...
 - ... **new ideas and topics** must be considered!
 - Leave room for **imagination**.



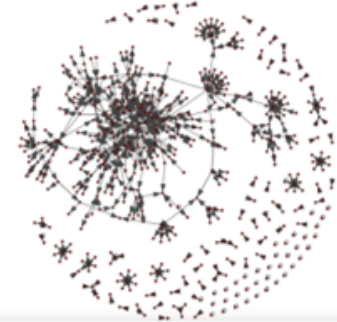
SOME EXAMPLES (2)



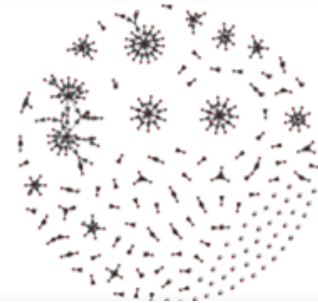
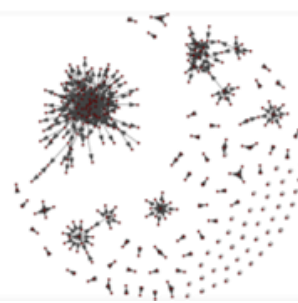
- US Elections 2020



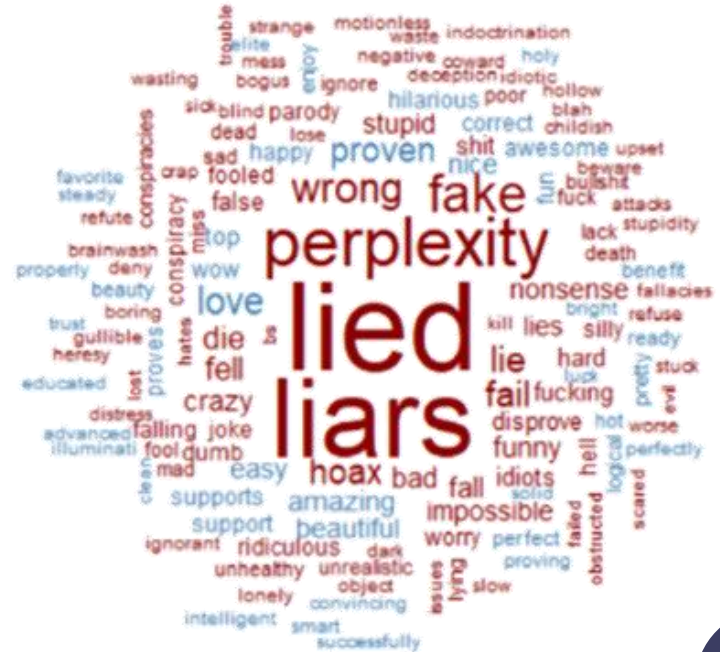
3 Novembre Trump 1k



3 Novembre Biden 1k

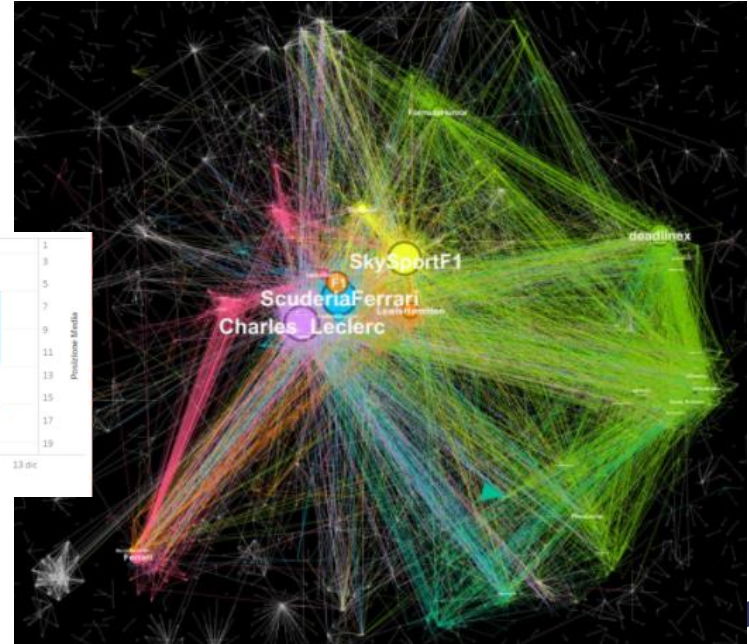
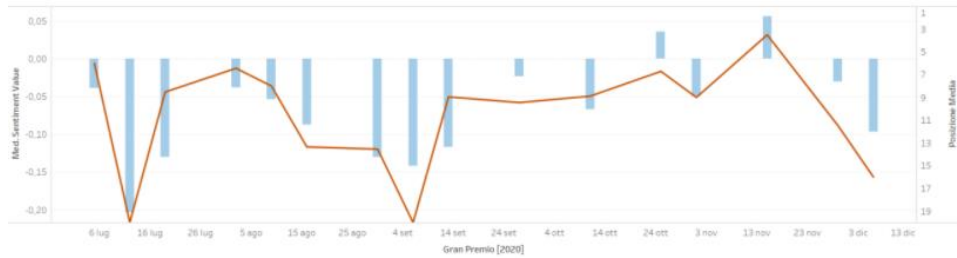


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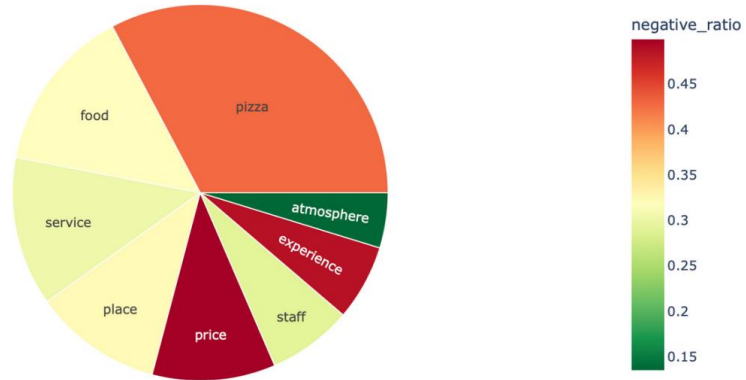
SOME EXAMPLES (4)

- F1 Community Analysis (Ferrari)

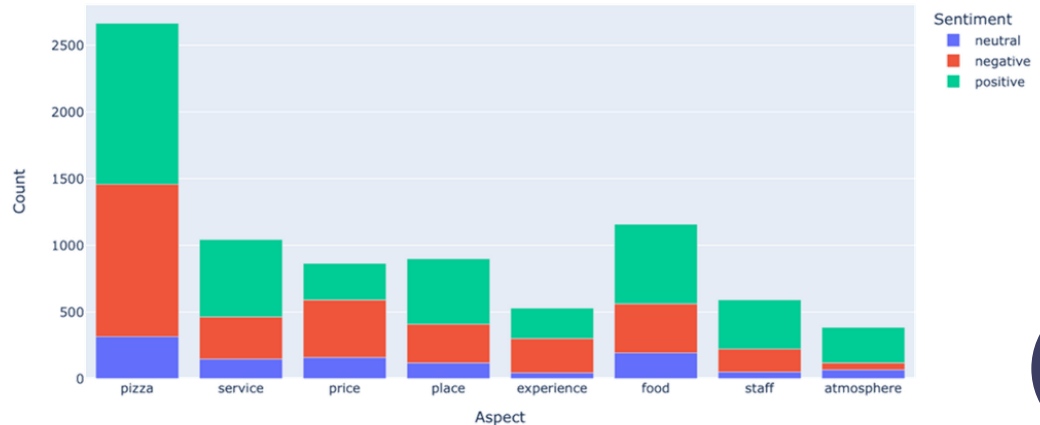


SOME EXAMPLES (5)

- #CrazyPizza



	positive	negative	neutral
pizza	1207	1142	315
service	581	315	147
price	274	431	159
place	491	290	118
experience	228	257	44
food	597	368	193
staff	369	172	50
atmosphere	267	52	66





SENDING AND PRESENTING THE PROJECT (1)



You must provide:

- Final report (and presentation).
- Data.
- Source code (+ "readme" file).

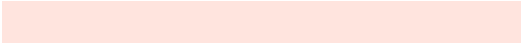
Deadline: at least 7 days before the written examination.

- Google Drive shared folder.
- How to name the folder:
 - WSA_surname1_surname2_...

Sharing:

- marco.viviani@unimib.it
- m.braga@campus.unimib.it

Discussion of the Project:


- A PowerPoint presentation (about 15 minutes per group).
 - Each member of the group must present an aspect of the Project.
- 



SENDING AND PRESENTING THE PROJECT (2)



PLEASE NOTE!


- 
- The submission and presentation of projects must be carried out in association with the current exam.
 - It is not possible to make the exam without having also sent the project.
 - In case of failure to pass the exam, the presentation of the project will be made equally by ALL members of the group, and its evaluation will be kept valid for subsequent exams.





PROJECT REPORT




- 
- The **report** must discuss:
 - **Objective:** What is the objective of the analysis, what phenomenon is to be discovered or described.
 - **Data:** Strategies adopted for data collection and description of those available for analysis.
 - **Models:** Description of the analysis models used.
 - **Results:** Analysis of the results, visualization, and discussion.





EVALUATION CRITERIA

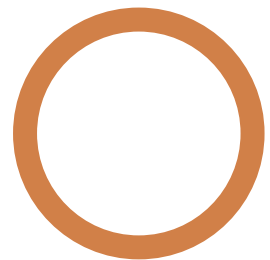


- 
- **Overall assessment** → max **8 points**
 - **Objective:** Completeness and clarity [1 point]
 - **Data:** Correctness [1 point]
 - **Models:** Correctness [2.5 points]
 - **Results:**
 - Completeness and clarity [2.5 points]
 - Effectiveness of visualizations [1 point]






2. SOCIAL SEARCH





GENERAL INFORMATION



- 
- Groups of 2, (max) 3 participants.
 - Develop a **search engine** for social search:
 - Define the **domain** in which social search will be performed.
 - **Collect/identify** data suitable to perform social search.
 - Identify the **main relevance dimensions** and **features** w.r.t. the selected domain based on which results should be ranked/re-ranked.
 - Assess the **effectiveness** of the developed search engine.





SENDING AND PRESENTING THE PROJECT (1)



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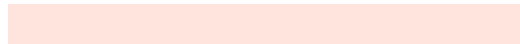
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- g.peikos@campus.unimib.it

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SENDING AND PRESENTING THE PROJECT (2)



PLEASE NOTE!


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PROJECT REPORT




- 
- The **report** must discuss:
 - **Objective:** What is the objective of the search engine.
 - **Data:** Strategies adopted for data collection and description of the choices that leads to the collection of particular information suitable for social search.
 - **Models:** Models employed to develop the search engine and other modeling choices.
 - **Evaluation:** Evaluation framework, metrics, and discussion.





EVALUATION CRITERIA



- 
- **Overall assessment** → max **8 points**
 - **Objective:** completeness and clarity [1 point]
 - **Data:** correctness [1 point]
 - **Models:** correctness [2.5 points]
 - **Evaluation:**
 - Completeness and correctness of evaluation metrics [2.5 points]
 - Clarity and correctness of the discussion [1 point]



QUESTIONS?

