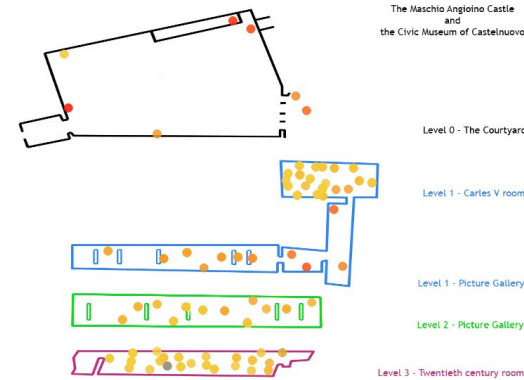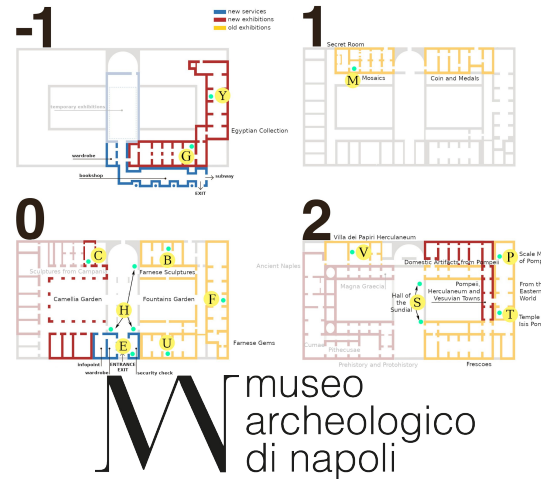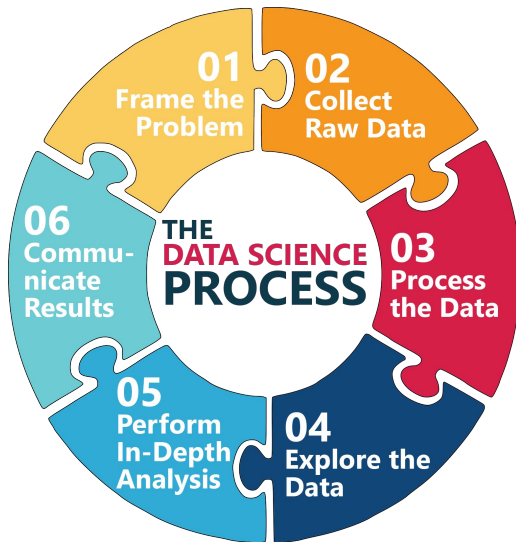# Vincenzo Schiano Di Cola (M.Sc. Math)
Tutors: Nicola Mazzocca, Francesco Piccialli
XXIX Cycle - I year presentation

Data Science
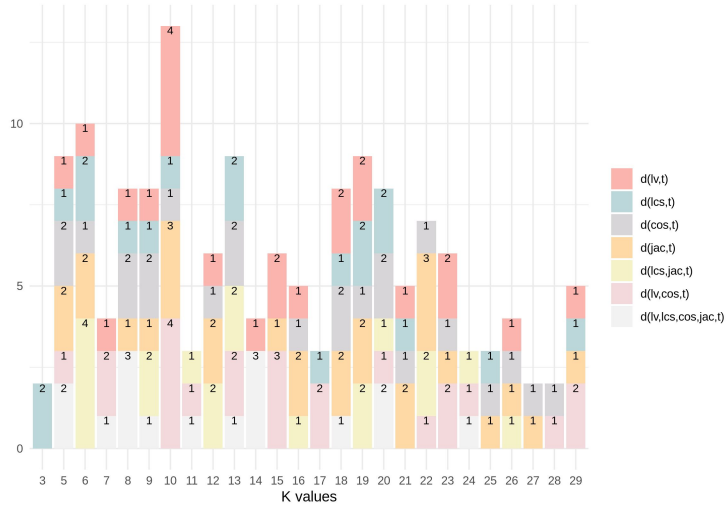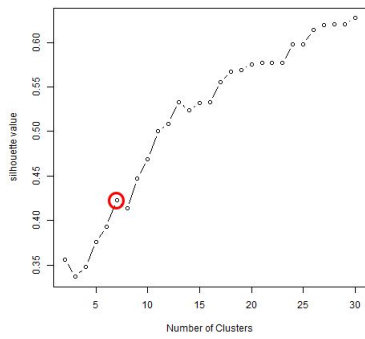## for predictive analysis

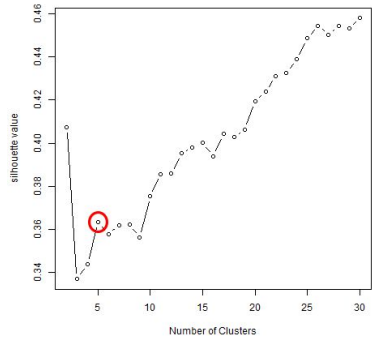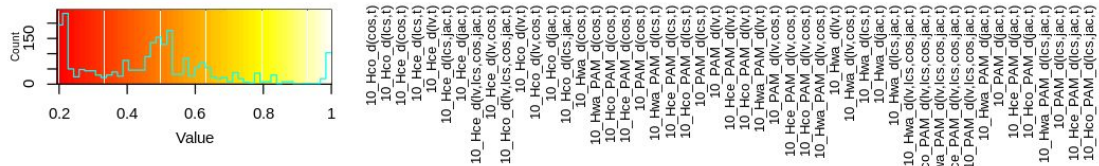# Research activity: Process

Methodology

Research Problems

- Cultural Heritage domain: visitors behavior
  - Clustering method to understand the visitor's paths
  - Assess the quality of a cluster
  - Select the correct number of clusters
  - Deal with non-numerical features like paths (sequences of nodes)
  - Give insights of visitor's behavior to museums' decision-makers
  - Understand Sequential Decisions via Inverse Reinforcement Learning

- Health domain: medical prescriptions and booking appointments
  - Knowledge graph-related problems (link prediction, reasoning, …)

Research activity: Clustering

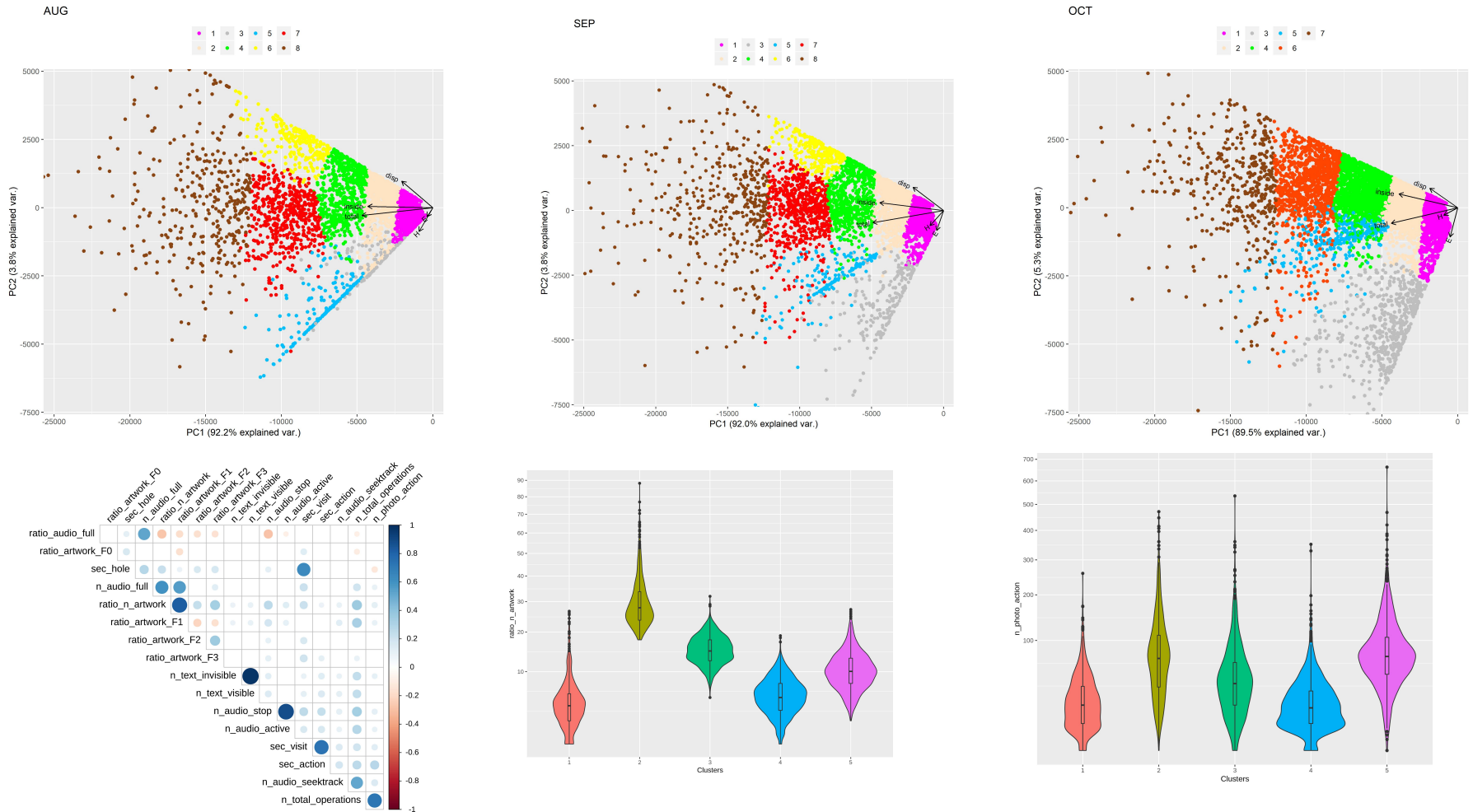F-score $F_1 = 2 \cdot \dfrac{p \cdot r}{p + r}$

Vincenzo Schiano Di Cola

Research activity: cluster insights

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Research activity: Knowledge graph

Current research

Products
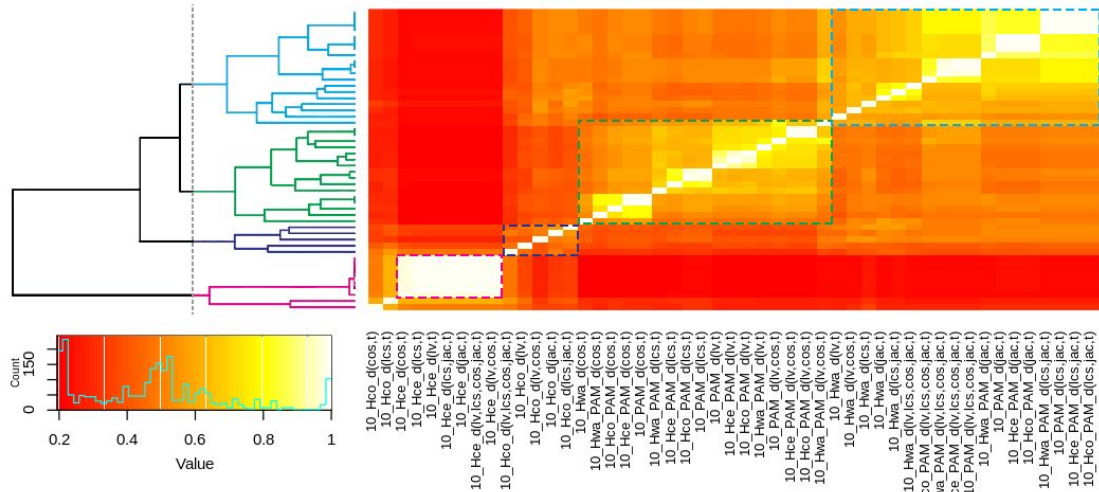
1. "*A machine learning approach for IoT cultural data*" on **Journal of Ambient Intelligence and Humanized Computing**. First Online: 04 September 2019. DOI: 10.1007/s12652-019-01452-6

2. "*Exploring Unsupervised Learning techniques for the Internet of Things*" on **IEEE Transactions on Industrial Informatics**. Date of Publication: 12 September 2019. DOI: 10.1109/TII.2019.2941142

3. "*Decision Making in IoT Environment through Unsupervised Learning*" on **IEEE Intelligent Systems**. Date of Publication: 01 October 2019. DOI: 10.1109/MIS.2019.2944783

- Poster session - "Unsupervised Learning: Similarities and Distance Functions for IoT Data" and "Unsupervised Learning: A Time Perspective Analysis of Visitors' Behaviors" - 1/07 to 4/07 @ eBISS 2019 in Berlin, Germany.

- Presentation - "Partitionings and Similarity Metrics in Unsupervised Learning" - 11/07/2019 - Young researchers mini-symposium, @ INDAM Intensive Period 2019
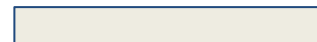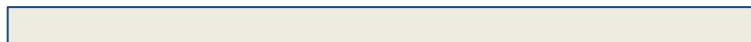
* Collaborations with: DMA "Renato Caccioppoli" and CINI

Vincenzo Schiano Di Cola

Next years

1th year credits - Table for training

	Credits year 1							Credits year 2				Credits year 3			
		1	2	3	4	5	6								
	Estimated	bimonth	bimonth	bimonth	bimonth	bimonth	bimonth	Summary	Estimated	bimonth	bimonth	Summary	Estimated	Summary	Total	Check
Modules	29	4	1,2	3	12	6	0	**26,2**	21	6	4	**10**	0	**0**	**36,2**	**30-70**
Seminars	7	0	2,5	0	1	4,8	0,4	**8,7**	5	0	5	**5**	0	**0**	**13,7**	**10-30**
Research	24	3	5	3	4	3	7,1	**25,1**	34			**0**	60	**0**	**25,1**	**80-140**
	60	7	8,7	6	17	13,8	7,5	**60**	60	6	5	**15**	60	**0**	**77**	**180**