



## Data Science Laboratory

# Introduction to the course

# Course content

- Data science algorithms and techniques
  - Data preparation
  - Association rule extraction, clustering
  - Classification, regression
  - + labs
- Python programming
  - Basic language constructs
  - Multidimensional arrays
  - SciKit learn, Pandas

# Course content

- In depth lab sessions
  - open-source datasets
  - hands on analytics experience
  - competitions
- Company case studies
- Research bites
  - Seminars on advanced data science techniques

## ➤ Course books

- Tan, Steinbach, Karpathe, Kumar, *Introduction to data mining*, 2<sup>nd</sup> edition, Pearson, 2019
- Han, Kamber, Pei *Data mining: concepts and techniques*, 3<sup>rd</sup> edition, Morgan Kaufmann, 2011
- Kent D. Lee , *Python Programming Fundamentals*, Springer, 2015
- Jake VanderPlas, *Python Data Science Handbook: Essential Tools for Working with Data*, O'Reilly, 2016