SPRING SCHOOL
DATA SCIENCE

TEACHING AND RESEARCH UNIT «APPLIED MATHEMATICS COMPUTER AND DATA SCIENCES» 13 – 17 JUNE 2022
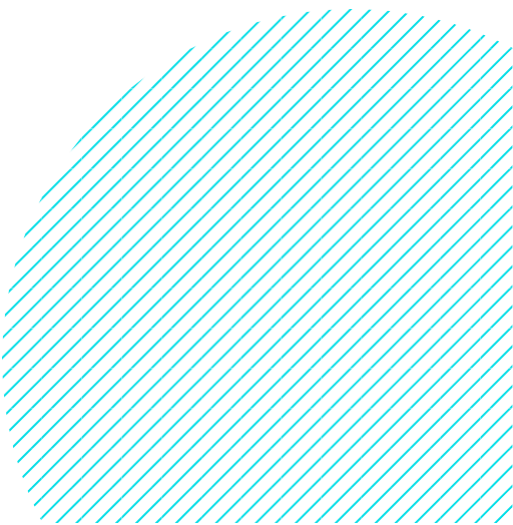
AUDIENCE

Mainly intended for PhD students, it is also open to M2 students in applied mathematics or computer science and to 3A engineering students. Experienced engineers or researchers interested in this field are also welcome.

OBJECTIVE

This week will provide an in-depth look at the fundamental principles and methods of data science. It is aimed at engineering students, PhD students, researchers and future business creators. Our main goal is to provide an overview of the methods and tools for data analysis (even big data) and Machine Learning. Our teaching will rely on both theorical and practical courses .They will also have a presentation on the job of data engineer and its importance in the value chain of a data project. These applications will be quite broad, from imaging to software engineering and their importance in data research. Business intelligence and security should also
be addressed for data.

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SCHEDULE

MONDAY 13 JUNE 2022

9h00 -10h30: Introduction to Machine Learning, Supervised learning, Luis Salamanca and Nathanaël Perraudin, Swiss Data Science Center (SDSC), EPFL, ETH-Zurich
10h45-12h15: Supervised Learning, Luis Salamanca and Nathanaël Perraudin
14h15-15h45: Practical Course in Machine Learning, Guillaume Desforges, full stack developper and data scientist at Tweag with Théo Viel Deep Learning Researcher at DAMAE Medical & Kaggle Competitions Grandmaster
16h00-17h30: IA & industrial economics, Abdelkader Slifi, Paris Dauphine University

TUESDAY 14 JUNE 2022

9h00 -10h30: Supervised Learning, Luis Salamanca and Nathanaël Perraudin
10h45-12h15: Unsupervised Learning, Luis Salamanca and Nathanaël Perraudin
14h15 -15h45: Practical Course in Machine Learning, Guillaume Desforges with Théo Viel
16h00-17h30: Practical Course in Machine Learning, Guillaume Desforges with Théo Viel

WEDNESDAY 15 JUNE 2022

9h00-10h30: 3D Artificial Vision, Pascal Monasse, École des Ponts ParisTech
10h45-12h15:3D Artificial Vision, Pascal Monasse
14h15-15h45: Practical Course in Machine Learning, Guillaume Desforges with Théo Viel
16h00-17h30: IA & Business intelligence, Redha Moulla, founder AxIA - Data science | Innovation | Transformation

THURSDAY 16 JUNE 2022

9h00- 11h00: Introduction to Deep Learning. Optimization, Luis Salamanca and Nathanaël Perraudin
11h10-12h40: Deep Learning: Architecture and losses, Luis Salamanca and Nathanaël Perraudin
14h15-15h45: Practical course in Deep Learning, Clément Riu, phd student at LIGM-Ponts, Thomas Chabal, phd student at inria-Willow
16h00-17h30: Practical course in Deep Learning, Clément Riu, Thomas Chabal

FRIDAY 17 JUNE 2022

9h00- 11h00: Big Data & Architecture, Benoit Franck, architect data at Saagie
11h10-12h10:« What is a data engineer?   », Benoit Franck
14h15-15h45: Practical course in Deep Learning, Clément Riu, Thomas Chabal
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IN PARTNERSHIP WITH ETHzürich EPFL Ðauphine | PSL UNIVERSITÉ PARIS École des Ponts ParisTech

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