

Summerschool presentation

July 2, 2019

Welcome to the summerschool !

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- ▶ Our study will consist in theoretical notions, exercises and practival activities.

Organisation

- ▶ We will be two teachers :
 - ▶ Nicolas Bourgeois
 - ▶ Nicolas Le Hir (myself)

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 - ▶ Nicolas Bourgeois : will focus more on **Machine Learning**
 - ▶ Nicolas Le Hir (myself) : will focus more on **Artificial Intelligence**

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 - ▶ Nicolas Le Hir (myself) : will focus more on **Artificial Intelligence**
- ▶ The two domains are closely related and the difference between the two is not always obvious.

Organisation Week 1

- ▶ **Tuesday 2** Introduction to AI, probabilities, decision trees.
- ▶ **Wednesday 3** Introduction to Machine Learning, Data Vizualisation
- ▶ **Thursday 4** Classification Tools and application to Character Recognition
- ▶ **Friday 5** Labyrinth mini-project

Organisation Week 2

- ▶ **Monday 8** Exams week 1
- ▶ **Tuesday 9** Monte Carlo methods
- ▶ **Wednesday 19** Reinforcement learning
- ▶ **Friday 12** SVM, penalisation, kernelization

Organisation Week 3

- ▶ **Monday 15** Exams week 2, Neural Networks
- ▶ **Tuesday 16** Self organizing maps
- ▶ **Wednesday 17** Bayesian methods, Natural Language Processing
- ▶ **Thursday 18** Phantom of the Opera mini-project

Ressources

- ▶ <https://github.com/nlehir/summerschool> contains our slides and exercices.

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- ▶ When doing exercises, we will be using **python 3**