

Welcome

IML

Cédric Buche

ENIB

14 septembre 2020

- 1 Topics & Challenges
- 2 Location
- 3 Teachers
- 4 Exams
- 5 Calendar
- 6 Human Computer Interaction (HCI)
- 7 Interactive Machine Learning (IML)

Topics & Challenges

▷ Machine Learning

The Facebook logo, featuring the word "facebook" in white lowercase letters on a blue rectangular background.

▷ Applications

- ◇ Voice recognition
- ◇ Spam detection
- ◇ Stock market
- ◇ Play chess
- ◇ Self driving cars

Topics & Challenges

- ▶ Machine learning
 - ◇ Useful
 - ◇ Looks pretty complicated
 - ◇ IML : pretty easy + a lot of fun

- ▶ Interaction



Location



- ▷ Cédric Buche, Professor ENIB
- ▷ Pierre De Loor, Professor, ENIB



Exams

- ▷ Ongoing assessment
- ▷ Lab
- ▷ project



Resources

- ▶ Calendar : <http://siia.univ-brest.fr/w/index.php/EDT>
- ▶ Documents : <http://siia.univ-brest.fr/w/index.php/IML>
- ▶ Contact : buche@enib.fr

IML

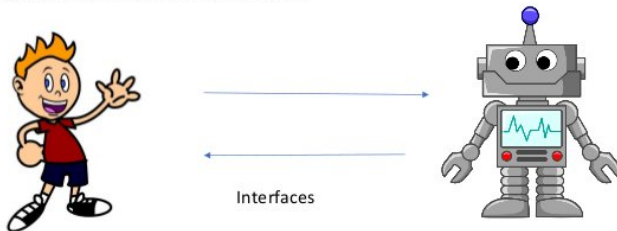
Date week	Topics	Type	Room	Teacher	Topics
1 15 sept	Introduction - Basic algorithms	Lecture	CERV	C. BUCHE	linear regression, polynomial regression, naive bayes, decision tree, logistic regression, neural network, SVM, HCI, IML
2 17 sept	Data	Lecture	CERV	C. BUCHE	data preparation, frameworks, hyper-parameters, data reduction
3 17 sept	Features extraction - Tests	Lecture	CERV	C. BUCHE	feature extraction, K-Fold cross validation, confusion matrix, accuracy, precision, recall, F1 Score, overfitting/underfitting
4 18 sept	AI Examples	LAB	CERV	C. BUCHE	classification of galaxies
4 18 sept	AI Examples	LAB	CERV	C. BUCHE	classification of galaxies
5 22 sept	Interactive robotic	Lecture	CERV	C. BUCHE	HRG - Robocup example
7 1 oct	AI Examples	LAB	CERV	C. BUCHE	classification of galaxies
6 8 oct	behavability	Lecture	CERV	C. BUCHE	
8 22 oct	Interactive robotic	LAB	CERV	C. BUCHE	
9 5 nov	Interactive robotic	LAB	CERV	C. BUCHE	
10 12 nov	Deep Learning	Lecture	CERV	P. DE LOOR	
11 19 nov	Deep Learning	LAB	CERV	P. DE LOOR	
12 26 nov	Deep Learning	LAB	CERV	P. DE LOOR	

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HCI

HCI :

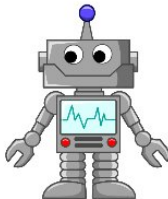
Communication between a human user and a computer system, referring in particular to the use of input/output devices with supporting software



HCI



Vision : eyes
Sound : Ears
Touch : Body
Smell : Nose
Taste : Tongue



Vision : Camera
Sound : Micro/speaker
Touch : Keyboard/Mouse

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- ▷ Autonomous machine learning systems : often require intense engineering effort to be effective
- ▷ How machines can interact with people to solve problems more efficiently than autonomous systems ?
 - ◇ Humans interacting with robots to teach them to perform tasks
 - ◇ Humans helping virtual agents play video games given feedback on their performance
 - ◇ ...

▷ Domain :

- ◇ Machine Learning
- ◇ Artificial intelligence
- ◇ Human-computer interaction
- ◇ Cognitive science
- ◇ Robotics



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