





Understanding Intelligently Artificial Intelligence:

a citizens' open formation.

Fréderic Alexandre, Robert de Barretin, Jade Becker, Marie-Hélène Comte, Martine Courbin, Sonia Cruchon, Aurélie Lagarrigue, Bastien Masse, Sophie de Quatrebarbes, Julie Stein, Claude Terosier, and Thierry Viéville

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01. What for? Context and objectives

Understand the how-to of AI science to master AI technology

- Digital science deeply impact our whole society, AI induces a disruptive change
 - > Being a "user" means be subjected to whom creates digital objects
 - > Everyone must be able to choose, co-construct, accept or deny h(er|is) usage
- Now (at last!) our children start learning computational thinking
 - > At school : creative programming, unplugged computer science, ...
 - > Beyond : ludic robotics, maker activities, internet mastering
 - Let's STEAM including AI!



02a. What about? The key notions

Al is "the science of making machines do things that would require intelligence if done by [human]" (Marvin Minsky 1968).



- Very efficient information processing but without "understanding a word"
- Need as much as possible specific à-priori information, no "free-lunch"



- Programming paradigm: designing architecture and feeding data
 Both symbolic knowledge representation and numeric approximation

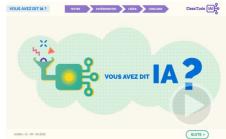


- Change our vision of natural (i.e., biological) intelligence, intentionality, ...
- Induce disruptive (not so visible) change in our society



02b. What about? The key notions





https://classcode.fr/iai

- What is artificial intelligence? ... and what it is not.
 - > #historical-aspects #machine-animal-human-intelligence #numeric-versus-symbolic #knowledge-formalization #numeric-representation #critical-thinking
- How to do artificial intelligence? ... machine learning.
 - > #data-programming #understand-the-basis #abscons-words-demystified #discovering-by-doing
- Artificial intelligence at our service? ... issues and levers, in order AI to really be at the service of people.
 - > #beyond-myths-or-rhetoric manipulation #what-is-already-here #what-could-happen-(or-likely-not) #applications-with-AI



03. How to? Method and production

A MOOC and modular resources

 Open and reusable resources (video, text, applet)



Auto evaluation

+ Activity result quantification

+ Quiz



Free attestation

 Concrete activities (online and unplugged) to learn by doing





Contribution to K12 teaching resources and formation



- Forum to
- Ad-hoc explanation
- Peer to peer discussions
- Formation improvement



* On line "rendez-vous"

+ Real-life actions

* Event participation (before march and soon;))

04a. So what? First results and Analysis



- FUN platform data (from April 2020 to June 2021):
 - > more than 25000 inscriptions (37% female, 62% male, 1% not binary) (32 % under 35 years, 44% between 36 and 55, 24% above 56)
 - > more 3700 persons enjoying at least one module
 - > 1908 attestations of success



- Inria Learning Lab questionnaire :
 - > Above 95% of person having their expectation satisfied (48% fully satisfied)

Source: questionnaire - Inria Learning Lab - 200 answers, beginning of July



04b. So what? First results and Analysis



- Who is who?
 - > mainly active (54% on activity, 12% retired, 15% students, 9% job researcher)
 - > mostly with university level (77% at least bachelors in any field, 10% PhD)
 - > rather beginners in the field (63% full beginners, 33% intermediate non expert)



- How much work?
- working 10 to 20 hours in average (about 50% of the persons spend from 2 up to 5 hours per week, during about 3 weeks, while 25% spend less and 25% more)



04c. So what? First results and Analysis



- Forum activity :
 - > more than 1500 persons have been or are active while
 - > more than 8100 are reading the about 912 discussions,
 - > more than half of the transactions being on the course contents (e.g., strong versus weak AI, symbolic versus numeric methods, societal issues, ...).



- Hybrid activities:
 - > more than 10 online hangouts of 30 to 200 persons during confinement
 - > participation in the "educatec/educatice" main French event before
 - > more to come ...



05. What's next? Conclusion, perspective



- What is still needed
 - > extend the existing formation with more operational tutorials,
 - > manage some technical weakness (recent external resources to be consolidated)
 - > complete the existing contents to better help the learner progression
 - > offers links towards "next level" initiation in machine learning



- With respect to other offers
 - > Not only talking about IA but a real maker approach
 - Less technical than the (e.g., Finish) best offers
 (e.g., no python programming, but still using real or toy AI platforms)



Towards an "ubiquitary citizen university in digital science and culture"













































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