Understanding Intelligently Artificial Intelligence :

a citizens' open formation.

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Contents

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 !

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02a. What about ? The key notions

**AI 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

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02b. What about ? The key notions

https://classcode.fr/iai
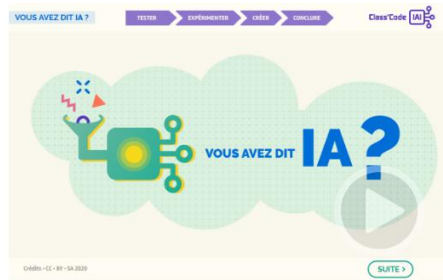
- What is artificial intelligence? … and what it is not.
  - > #historical-aspects #machine-animal-human-intelligence #numeric-versus-symbolic #knowledge-formalization #numeric-representation #critical-thinking

- 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

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03. How to ? Method and production

A MOOC and modular resources

- Open and reusable resources (video, text, applet)

- Concrete activities (online and unplugged) to learn by doing

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

Auto evaluation
+ Quiz
+ Activity result quantification
+ Real-life actions

Free attestation

* On line "rendez-vous"
* Event participation
  (before march and soon ;))

Contribution to K12 teaching resources and formation

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04a. So what ? First results and Analysis

- FUN platform data (begging of July) :

  > more than 13000 inscriptions
  (36% female, 63% male, 1% not binary)
  (32% under 35 years, 44% between 36 and 55, 24% above 56)

  > more 1600 persons enjoying at least one module

  > 600 attestations of success after 2 months

- Inria Learning Lab questionnaire :

  > Above 90% of person having their expectation satisfied (43% fully satisfied)

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

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04b. So what ? First results and Analysis

- Who is who ?
  - > mainly active (52% on activity, 14% retired, 12% students, 8% job researcher)
  - > mostly with university level (77% at least bachelors in any field, 10% PhD)
  - > rather beginners in the field (58% full beginners, 38% 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)

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04c. So what ? First results and Analysis

- Forum activity :
  - > more than 1500 persons have been or are active while
  - > more than 3500 are reading the about 200 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 ...

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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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