



Short Syllabus



Course Title

Do Algorithms Have Imagination?

Lecturer

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Contact details

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office hours – by appointment

Semester

Spring 2022-3

Short Description

In 2018 the art world was shocked to hear that a work titled "The Portrait of Edmond Belamy" created by an Artificial Intelligence (AI) algorithm was sold for \$432,500. Is this the end of art as we know it? Is this the end of human imagination? If algorithms can create works of art, does it mean they can be innovative in other domains, such as drug development and designing mass consumption products?

In this course we will re-think the notion of imagination in light of the rise of AI technologies. The first part of the course will be devoted to learning the various types of AI algorithms (machine learning, genetic programming, Bayesian algorithms etc.), and to a critical examination of the principles of AI and the methodological, socio-ethical, and technical challenges they pose. In the second part of the course, we will investigate what imagination is and the role of creativity in the imaginative process. Finally, we will assess if algorithms can have imagination and what the potential consequences are of their innovative products. We will examine a novel theoretical model according to which humans and algorithms cooperate from the early stages of definition all the way to execution.

Final grade components

Midterm: a short essay (2 pages) - 15%.

Final requirement: A short paper between 5 and 6 pages long (1250-1500 words, double-spaced, excluding bibliography) – 75%.

Participation: active participation in class - 10%.

Attendance

Attendance is mandatory. Students are permitted a maximum of three unauthorized absences without penalty. Any additional absences will affect the final grade and may result in failure of the course.*

Academic Conduct

Plagiarism is taken extremely seriously. Any instance of academic misconduct which includes submitting someone else's work as your own; failure to accurately cite sources; taking words from another source without using quotation marks; submission of work for which you have previously



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received credit; working in a group for individual assignments; using unauthorized materials in an exam and sharing your work with other students, will result in failure of the assignment and will likely lead to further disciplinary measures.*

Final assignment

Exam dates and submission deadlines are published on the Liberal Arts website. Courses with a final exam also have a second make-up exam. Students requiring an extension for a final paper must submit an Academic Committee Request Form to the Liberal Arts office in advance of the deadline. Late papers will be subject to a point deduction.*

Additional requirements

* See Liberal Arts academic handbook for further details