

Writing and Rhetoric in an Age of Algorithms

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Course Description:

This course examines the role of algorithms in digital writing and rhetoric. It asks students to critique procedures and instructions as they relate to writing processes and production. The course covers rhetorical theory in economic, mathematical, and digital contexts. Students are asked to critique an algorithm of their choice, design a writing interface to facilitate algorithms, and write two papers drawing on course texts and outside research.

Course Questions:

- How do procedures and instructions relate to writing?
- What is the role of writing with respect to online content and digital delivery mechanisms?
- How are digital rhetoric, algorithms, and the internet, related?
- What groups and communities are at risk in an age of algorithms? How might we protect these (and other) groups from algorithmic procedures while taking advantage of procedural rhetoric?
- How might we design interfaces and templates to minimize the risk of algorithms and increase oversight over algorithms?

Texts:

- *Virtual Competition: The Promise and Perils of the Algorithm-Driven Economy* by Ariel Ezrachi
- *What Algorithms Want: Imagination in the Age of Computing* by Ed Finn
- *The Black Box Society: The Secret Algorithms That Control Money and Information* by Frank Pasquale
- *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy* by Cathy O'Neil
- *Algorithms to Live By: The Computer Science of Human Decisions* by Brian Christian
- *Persuasive Games* by Ian Bogost
- *Overcomplicated: Technology at the Limits of Comprehension* by Samuel Arbesman
- *Ethical Programs: Hospitality and the Rhetorics of Software* by James J. Brown, Jr.
- *Algorithms Unlocked* by Thomas H. Cormen
- A variety of articles are assigned and available through our course management system as PDF or by direct hyperlink

Assignments:

- 1) **Attendance (10%).**
- 2) **Interface design poster (20%).** You are to reimagine a current interface so that it could collect data (a) more efficiently and (b) provide users with a wider means of expression.
- 3) **Unboxing an Algorithm (30%).** For your mid-term, you are to research the values and ideology of a chosen algorithm.
- 4) **Taxonomy Project (40%).** For your final project, you must create taxonomy of our readings from the semester as well as ten articles you have researched on your own.

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You must create categories that separate our readings from one another while providing an extensive rationale for these categories.

Classroom Community Policy:

- 1) You are expected to submit all assignments, readings, and writings by the announced due date. Late assignments and lack of preparation will be marked down. This includes bringing any texts to class if we are using them. You are responsible for printing them out, which I believe is a fair trade for not making you buy any books.
- 2) Cell-phone use is not allowed in class. If you need to text, hide it well.
- 3) If you are called on, I expect you to answer to the best of your ability. It is perfectly acceptable to be unsure of your answer—that is the goal of higher education: to take risks. I reward risk-taking. I encourage you to think and venture an answer.
- 4) Everyone in class has different levels of comfort. I expect all members of our community to respect one another. For those individuals who are more comfortable talking, I expect you to ask your fellow classmates questions to encourage them to add to our discussion. For those less comfortable, I expect you to make an attempt to add your thoughts to the discussion, even if it is a brief statement. Further, for those less comfortable talking in class, there will be other types of participation, which includes emailing me ideas to bring up in class, peer review, group work, and so forth. I expect everyone to listen actively to another. In this way, participation includes more than talking; it also includes listening, posing questions, and completing all in-class assignments to the best of your ability. Respect means listening, taking notes, and joining/enhancing conversations that challenge each other and your instructor using civil language and tone.
- 5) We all come from different lives and have different journeys, so we should expect and embrace vibrant disagreement and productive dissent. A democratic society cannot thrive otherwise. Therefore, I expect us to continually strive for a spirit of grace, compassion, and respect in our learning journeys (both in agreements and disagreements) for the short time we are together in this course. If at any time you feel that these expectations are not being met, please let me know as soon as possible.

Plagiarism/Academic Integrity

(http://admin.illinois.edu/policy/code/article1_part4_1-401.html):

The University of Illinois has high standards of academic integrity set out in Article 1, Part 4 of the University Student Code (copied below), which I uphold.

- (1) Policy Statement. The University has the responsibility for maintaining academic integrity so as to protect the quality of education and research on our campus and to protect those who depend upon our integrity.
- (2) Expectations of Students. It is the responsibility of each student to refrain from infractions of academic integrity, from conduct that may lead to suspicion of such infractions, and from conduct that aids others in such infractions. Students have been given notice of this Part by virtue of its publication. Regardless of whether a student has actually read this Part, a student is charged with knowledge of it. Ignorance is not a defense.
- (3) Expectations of Instructors. It is the responsibility of each Instructor to establish and maintain an environment that supports academic integrity. An essential part of each Instructor's responsibility is the enforcement of existing standards of academic integrity. If

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Instructors do not discourage and act upon violations of which they become aware, respect for those standards is undermined. Instructors should provide their students with a clear statement of their expectations concerning academic integrity. Students Requiring Accommodations: If you have a disability that requires accommodation in order for you to be successful in this class, please let me know immediately. If you haven't already, you should contact the Division of Disability Resources and Educational Services (DRES) for accommodation support. Their website is <http://www.disability.illinois.edu/>

Emergency Response Recommendations:

In an emergency in this building, we'll have three choices: **RUN** (get out), **HIDE** (find a safe place to stay inside), or **FIGHT** (with anything available to increase our odds for survival). Take time to familiarize yourself with the University's emergency response recommendations at <http://police.illinois.edu/emergencyplanning/general/>

Tentative Schedule

Week 1

- Introduction to course and algorithms
- *Persuasive Games*

Part I: Defining Algorithms

Week 2

- *The Black Box Society*

Week 3

- *Virtual Competition: The Promise and Perils of the Algorithm-Driven Economy*
- "The Robotic Reporter" (Carlson)

Week 4

- *What Algorithms Want: Imagination in the Age of Computing*

Week 5

- "Understanding How Algorithms Work Persuasively Through the Procedural Enthymeme" (Brock and Sheppard)
- "The Algorithmization of the Hyperlink" (Antoniades, et al)
- "Algorithmic Translations" (Raley)
- "Rhetorical Allegorisms in Bitcoin" (Holmes)
- "Enthymeme as Rhetorical Algorithm" (Brock)

Part II: Algorithms in Context

Week 6

- "The Social Industry" (Christian Sandvig)
- "Big data analytics and the limits of privacy self-management" (Baruh & Popescu)
- "Grammar rules as computer algorithms" (Reiber)

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Week 7

- “A Theory of Persuasive Computer Algorithms for Rhetorical Code Studies” (Beck)
- “The gender binary will not be deprogrammed: Ten years of coding gender on Facebook” (Bivens)
- “Platforms Intervene” (Gillespie)

Week 8

- *Algorithms Unlocked*
- **Unboxing an Algorithm due**

Week 9

- *Algorithms to Live By: The Computer Science of Human Decisions*
- “Scrutinizing an algorithmic technique: the Bayes classifier as interested reading of reality” (Reider)

Part III: Algorithms and Interfaces

Week 10

- “Tag Writing, Search Engines, and Cultural Scripts” (Hirsu)
- “Interface as Exordium: The Rhetoric of Interactivity” (Carnegie)
- “Challenging the Monetized Template” (Gallagher)

Week 11

- “When big data meets dataveillance: The hidden side of analytics” (Esposti)
- “Selfies Intimacies: Tinder and the Swipe Logic” (David and Cambre)
- “Upvoting the Exordium” (Tarsa)

Week 12

- Meetings for Final project
- **Poster Presentations**

Part IV: The Social Power of Algorithms

Week 13

- *Ethical Programs: Hospitality and the Rhetorics of Software*
- “Digital Outragicity” (Rice)

Week 14

- *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy*
- “When Algorithms Shape Collective Action: Social Media and the Dynamics of Cloud Protesting” (Milan)

Week 15

- *Overcomplicated: Technology at the Limits of Comprehension*

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Final project during week of finals