Algorithmic Culture

SI 710.004 / COMM 820.001 -- Fall 2016; Prof. Sandvig, University of Michigan
http://7??niftyc.org/

“[There is a] need to create a new field around the social algorithm, which examines the interplay of social and computational code.” –David Lazer (2015)

“‘Algorithm studies’ is the critical study of the social, political and cultural life of the algorithm and its conditions of change, evolution and possibility.” –Jenna Ng and David Theo Goldberg (2015)

“That we are now turning to algorithms to identify what we need to know is as momentous as having relied on credentialed experts, the scientific method, common sense, or the word of God.” –Tarleton Gillespie (2015)

“An algorithm must be seen to be believed, and the best way to learn what an algorithm is all about is to try it.” –Donald Knuth (1968)

Course Description

The humanistic and social scientific study of information and communication technologies is fundamentally concerned with one problem: these socio-technical systems shape what we experience. This concern is longstanding, worries about technology, automation and computerization have a long history, and “algorithm” is a very old word. Yet recently there has been an explosion of new scholarly work examining algorithms and culture, a pairing of two topics that many people find at least 50% mysterious. Researchers claim that the contemporary use of automated (“algorithmic”) systems to produce, consume, curate, mediate, store, and sell social and cultural life heralds a set of pivotal transformations for culture itself. To investigate these latest claims, this course surveys contemporary research that considers the implications of computational processes that treat culture as data. We will draw from science and technology studies, information science, anthropology, communication, media studies, legal theory, sociology, and computer science, with additional contributions from psychology and philosophy. Although we will consider “natively algorithmic” digital cultural products (such as digital experiences like social media and video games), our overall goal will be to examine the potential transformation of any form of culture. Due to our multidisciplinary approach, no particular technical, humanistic, or social scientific background is required.

Instructor

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Learning Objectives

- Pose intellectual questions about algorithms and culture that demonstrate an understanding of both domains.
- Practice reading across disciplinary boundaries in a topical area where a large amount of new work is appearing and boundaries and definitions remain fluid.
- Take an informed position on the academic debates important to this developing field of knowledge.
- Relate future developments in the area of algorithmic culture to existing, enduring intellectual frames and ideas.
- Write a scholarly research paper equivalent to a conference paper in a sub-discipline relevant to this topic and relevant to your intellectual development and interests.

Course Credit

- Students from other programs (not SI or COMM) are welcome.
- This course grants credit for the graduate certificate in Science, Technology, & Society
- This course is intended for doctoral students. Other graduate students may enroll by instructor permission if there is a good reason to do so.

Class Requirements

Students will be responsible for a seminar paper proposal due midway through the term and a (research) seminar paper of about 25 double-spaced pages due at the end of term. A seminar paper should be similar in scope and format to a scholarly conference paper. In addition, there will be short assignments ("weekly questions") due at the beginning of each class meeting when reading is assigned. These will be read and discussed in class but not graded. All assignments will be turned in electronically.

No late work! No incompletes! (Without cause.)

Required Books

There are no required books. Readings will be distributed electronically. These are either free on the Web or use password-protected links to PDFs. These password-protected links lead to the reading in Canvas (directly from this syllabus). You do not need to use Canvas to access these readings -- it is easiest to navigate to them by clicking on the links on this page.

Recommended Books

These books are recommended in the sense that every doctoral student working in the social sciences and humanities should own them already. If you don't own them, you should buy them!

They are highly recommended.


**Schedule**

These dates and readings will be adjusted to reflect a student interest survey and our progress (or lack of it). This means that you should **check the class Web site regularly for updates.**

*Beware:* Note that links on this page to readings are often large PDF files.

(by week number)

1. **Introduction**
   - No required readings due today. Feel free to read ahead.

2. **What are algorithms? What are cultural algorithms? Why study them?**
3. What are important domains where algorithmic processes affect culture? How does this work?

4. How should we conceptualize “culture” itself?
   - Striphas, Ted. 2014. “Culture now has two audiences: People and Machines.”

5. How do “users” (or “algorithmic subjects”) experience and think about algorithms and culture?


6. How do “technologists” or “developers” experience and think about algorithms and culture?


• OPTIONAL: Seaver, Nick. 2014. On Reverse Engineering.

7. Seminar Paper Proposal Workshop Day

• Seminar Paper Proposal Due

• No readings are due today. Instead, we will workshop our seminar paper proposals.

8. What challenges and opportunities does machine learning pose in a cultural context?

• Hallinan, Blake, and Ted Striphas. 2014. “Recommended for You: The Netflix Prize and the Production of Algorithmic Culture.” New Media & Society. http://nms.sagepub.com/content/early/2015/02/02/1461444814538646

9. How does cultural automation alter labor and judgement? What does it mean to say that algorithmic judgement is inhuman?

10. What role do algorithms play in online interaction on social media?
Berg, Martin. 2014. Participatory trouble: Towards an understanding of algorithmic structures on Facebook. Cyberpsychology: Journal of Psychosocial research on Cyberspace, 8(3).


11. What methods and tactics do researchers use to investigate cultural algorithms?

- Bogost, I. (2012). Alien Phenomenology: or, What It's Like to Be a Thing. Minneapolis: University of Minnesota Press. (Ch. 4: Carpentry -- N.B.: "OOO" stands for Object-Oriented Ontology .)

12. How can algorithmic processes provide accountability? How are algorithms governed?


13. How can algorithmic processes be represented visually? Can cultural algorithms be user-controlled?
   - Browse Algorithmia, the private marketplace for algorithms. (esp. see “Use Cases”)
   - Browse Quantopian’s interactive trading algorithm designer
   - additional readings TBD
   - OPTIONAL: Browse VisualAlgo http://visualgo.net/

14. Summing up: What is the role of algorithms in cultural theory?

**Academic Integrity**

Unless otherwise specified in an assignment all submitted work must be your own, original work. Any excerpts, statements, or phrases from the work of others must be clearly identified as a quotation, and a proper citation provided. Any violation of the School of Information’s policy on Academic and Professional Integrity (stated in the Doctoral Student Handbook) will result in serious penalties, which might range from failing an assignment, to failing a course, to being expelled from the program. Violations of academic and professional integrity will be reported to UMSI Student Affairs. Consequences impacting assignment or course grades are determined by the faculty instructor; additional sanctions may be imposed by the Assistant Dean for Academic and Student Affairs.

**Accommodations for Disabilities**

If you think you need an accommodation for a disability, please let me know at your earliest convenience. Some aspects of this course, the assignments, the in class activities, and the way I teach may be modified to facilitate your participation and progress. As soon as you make me aware of your needs, we can work with the Office of Services for Students with Disabilities (SSD) to help us determine appropriate accommodations. SSD (734-763-3000; [http://ssd.umich.edu/](http://ssd.umich.edu/)) typically recommends accommodations through a Verified Individualized Services and Accommodations (VISA) form. I will treat any information that you provide in as confidential a manner as possible.

**Acknowledgement**

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tl;dr