

WORK IN THE AGE OF AI, ROBOTS, AND ALGORITHMS

a doctoral seminar at The University of Texas at Austin's School of Information

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why AI, robots, and algorithms?

In the past five years or so, the popular media and, more recently, academic discourse, have been brimming with accounts of how new technological advances in the areas of artificial intelligence (AI), robots, and algorithms will transform the landscape of work, with ramifications for occupations and employment on a potentially grand scale. In this doctoral seminar, we will examine the claims, the current reality, and likely futures of work in the age of these new technologies. Beyond examining the relevant economic arguments about the predicted size and composition of the workforce, our exploration will include consideration of ethics, system design (e.g., control, transparency, human role), organization design, technology designers, and new forms of work (e.g., crowdworking, precarious jobs, platform work). In addition, we'll take a close look at three work sectors in which nascent systems are in place: medicine, policing/justice/law, and journalism. My hope is that we will gain insights into not just what work might look like in the context of these new technologies, but what the path towards that future might be; what the issues and concerns are for workers, managers, designers, and others; and how scholars of work and technology might (should, can) contribute to the ongoing discourse.

what you will gain

Beyond developing domain knowledge in work in the age of AI, robots, and algorithms, we will also work to hone your scholarly skills:

Exploring	<ul style="list-style-type: none">• finding worthwhile literature in a new topic
Analyzing	<ul style="list-style-type: none">• integrating ideas across readings while building analytical and critical insights• identifying unanswered questions of value in a literature• posing a research question or hypothesis
Organizing	<ul style="list-style-type: none">• developing good writing and time management habits• outlining a paper and working through drafts to completion
Writing	<ul style="list-style-type: none">• crafting logical arguments to motivate or frame an inquiry• writing a well-crafted research paper
Participating	<ul style="list-style-type: none">• guiding discussion of academic papers• contributing to, integrating, and expanding a group understanding• reading and commenting constructively but critically on peers' work
Preparing	<ul style="list-style-type: none">• gaining insights into manuscript review and response• learning skills of journal selection for publication of your work

rules of the endeavor

attendance and participation

I expect you to attend every class and to have completed the reading and any assignments so that you can actively and thoughtfully engage in discussions. Your attendance and participation in class, including your willingness and preparation to discuss topics and your genuine, collaborative, and friendly behavior towards your classmates, will affect your grade, perhaps strongly, at my discretion. If you struggle with talking in class, contact me and we will discuss ways to make you more comfortable with it.

grading

See below for description of assignments in this list.

schedule	5%
two pages of text	5%
research question or hypothesis	10%
outline	15%
presentation	15%
<u>final paper</u>	<u>50%</u>
total	100%

late work policy

Assignments are due in hard copy at the beginning of class. Three assignments (schedule, two pages of text, presentation) *cannot be late* because they are needed in our class activity. But beyond the immediate needs of class timing, meeting deadlines is good preparation for you in becoming a strong scholar. Conferences, journal special issues, manuscript revision opportunities, and tenure and promotion reviews all demand on-time submission of work. Moreover, specific to this course, failing to meet deadlines inconveniences me (because I set aside specific times for grading), hampers my productivity, and shows disrespect for me. Thus, for the remaining assignments, you will *lose a letter grade* (e.g., A becomes B) if your assignments miss their due date/time. You will *lose an additional half a letter grade* (e.g., B becomes B-) if you fail to turn your assignment via *email (not via Canvas)* by 9 a.m. the next morning (Wed) and *all credit* if you fail to turn it in *as hard copy* at the following week's class. If you are ill, please notify me by email in advance of class, and then stay home to get better. We'll figure out a timeline for you.

the University of Texas honor code

The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the university is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community.

Source: <http://www.utexas.edu/welcome/mission.html>

documented disability statement

Any student with a documented disability who requires academic accommodations should contact Services for Students with Disabilities (SSD) at (512) 471-6259 (voice) or 1-866-329-3986 (video phone). Faculty are not required to provide accommodations without an official accommodation letter from SSD. Please notify me as quickly as possible if the material being presented in class is not accessible (e.g., course materials are not readable for proper alternative text conversion). Contact

SSD at 471-6259 (voice) or 1-866-329-3986 (video phone) or reference SSD's website for more information: <http://ddce.utexas.edu/disability/current-students/>

assignments (beyond the weekly reading and attendance/participation)

Before providing details of your assignments, I offer these two notes about what I expect:

formatting. For all assignments, unless noted otherwise, spacing must be at least 1.15 lines (except for the final paper, whose spacing must be two lines), font must be at least 12 point, and margins must be at least one inch top, bottom, and left and **two** inches on the right side. I demand staples over all manner of other clips and prefer double-sided printing. In no circumstances should you use cover sheets, plastic binders, ring binding, or small clips (except for the final paper, which may have a cover sheet and a clip if a staple is insufficient, but still no plastic). Do not condense font, use footnotes excessively, or otherwise attempt to squeeze more content in under each page limit. Instead, learn to edit, cut, chop, prune, and pare down your writing. Trust me, your work will be better for the effort and your grade will be higher.

content. In grading your work, I will look for clarity of presentation; integration of ideas from class readings and, as appropriate, beyond; good writing; creativity; depth of analysis and criticism; and conformance to the specific instructions for each assignment (including the formatting instructions above).

schedule

The rule of thumb at universities for most coursework is that you should expect to put in three hours outside of class for every one hour in class; doctoral seminars are often in excess of this time. Thus, you should plan to spend (at least) nine hours a week on this course outside of class. If we estimate that you will spend 4-5 hours reading the weekly papers and preparing a discussion of one of them, then you will have at least 4 hours per week remaining. Submit a schedule (as a document, a spreadsheet, or calendar screenshots) for weeks 2 through 13 (using week # and date) that details for each week how you will allocate these hours among these activities:

- completing the research question or hypothesis assignment
- locating, reading, pruning, and integrating/synthesizing literature around this topic (as four separate activities)
- writing your outline
- with my feedback on your outline, writing at least one draft of your final paper (no due date because I will not be reading your draft, so use your judgment for timing)
- revising your draft, ideally with feedback from a classmate, friend, or Writing Center tutor
- writing your final paper

If you keep track of your actual time spent and compare it to the schedule at the end of the course, you should gain some insights into how to budget your reading and writing time going forward.

two pages of text

You will come to class with the first two pages (hard copy) of any academic paper you wrote for a previous class or other endeavor. Do not alter these two pages in any way from their original presentation (my formatting requirements do not apply here); specifically, do not rewrite them.

leading a paper discussion

About every other week, you will lead the discussion of one paper from the week's assigned reading. Length may vary, but each paper discussion will be about 15 minutes. On no account should you prepare a handout or text-based slides. Do not give more than a couple of minutes of verbal introduction; we have no interest in hearing you read from prepared material or lecture us, but it would be nice if you could set the stage a bit, and for that you should practice so that you do not meander or drag on. You should not transfer any part of your job to another student by "cold calling" someone to summarize the reading. Instead, after your introduction, a good strategy might be to begin by posing a question of interest based on the reading and asking the class to address it. As the conversation progresses, you should integrate your peers' comments, using phrases such as "I'd like to build on what Sameer said" or "Returning to Alexis's comment" or "How can we balance Sarita's observation against Jordan's claim?" We will do the papers in order each week, so you can plan to build on the ones that come before your selected paper to help integrate ideas across the readings for that week. You can also push the conversation in new directions with comments such as "One aspect of the paper that has not come up yet in our conversations is..." You must prevent any one person from dominating the conversation and you should put the conversation back on track whenever it veers treacherously into unproductive territory. Do what you can to gently prompt quiet students to participate, perhaps by saying, "We haven't heard from some of you and I'm curious if you agree with the conclusions we seem to be drawing." Learning how to lead a scholarly conversation is a skill that will aid you as a professor, research team member, or lab lead.

research question or hypothesis

On no more than two pages, provide the rationale, motivation, and support for a single research question or hypothesis that you pose based on the class readings or on the reading you are doing for your final paper. At the end of your document, write succinctly the research question or hypothesis, formatted so as to set it off cleanly from the text. This research question or hypothesis need not build towards your final paper, but it would be fine if it did. The point of this exercise is to help you develop an idea of what a well-formed research question or a testable hypothesis looks like. In addition, this exercise is aimed at helping you identify a worthwhile unanswered question in the literature. Bring two copies of your document, one for me and one for a to-be-determined student.

outline

You will write an outline for your final paper in this class. (Make sure to read the final paper description below before writing your outline.) I appreciate that many of you write without using an outline. In this course, however, you will use one. Outlines are useful because they help you trace the logic of your argument. If a particular sentence seems awkward in a certain position in your outline,

not rightly grouped with the other sentences around it, then that is a clue that your organization of ideas is flagging. Your outline must contain only full sentences with no bulleted lists or sentence fragments. Each sentence must be its own numbered or lettered entry in your outline (hence, having its own specification, such as “ii” or “A” or “II”). At a minimum, your outline must identify the main sections and subsections of your paper. You should include paragraph topic sentences, but you may use fillers beneath them along the lines of “Here I will discuss the role of robots in manufacturing work from 1975 to 2000.” I expect an outline of no less than two pages and no more than three; it should include no references but may include citations (e.g., “Smith (1990) noted...”) if you want to give me an idea of the literature you will draw upon. Bring two copies of your document, one for me and one for a to-be-determined student.

presentation

You will give a presentation on your paper the last day of class. Depending on class size, expect the presentation to be about 10-12 minutes long. Describe the paper’s topic, note at which scholarly community you have aimed the paper, tell why the topic and that community appealed to you, outline your arguments and evidence, and sum up your conclusions. Use no slides, but stand to deliver your presentation. I will order your papers according to topics or themes so that we can parse our discussion of them across groups of papers.

final paper

Your final paper should be at least 18 well written and edited pages exclusive of references and any graphics that you might employ. It should address a topic in the area of *work* in the age of AI, robots, and algorithms (for example, it could focus on teachers but not on students, on police but not victims). Your writing should express clearly and logically your ideas and arguments. You should draw on a literature that extends well beyond what we read in class, and you should integrate that literature rather than provide synopses of one paper after another. You may write your paper as a literature review, as an essay on a particular construct or concept, or as the preface for an empirical study. In the case of an empirical study, I do not expect you to have data or findings, but you should include a research question or hypothesis. If you prefer some other genre or format, please discuss your preference with me *before writing your outline*.

readings (beyond articles listed below and stored on Canvas)

- required book: Brynjolfsson, E., & McAfee, A. (2014). *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*. New York: W. W. Norton & Company.
- suggested (not required) books on writing (the stuff of personal library building)
 1. Becker, H. S. (2008). *Writing for Social Scientists: How to Start and Finish Your Thesis, Book, or Article*. Chicago: University of Chicago Press.
 2. Thurman, S., & Shea, L. (2003). *The Only Grammar Book You'll Ever Need: A One-Stop Source for Every Writing Assignment*. Avon, MA: Adams Media.
 3. Zinsser, W., (2001). *On Writing Well: The Classic Guide to Writing Nonfiction*. New York: Harper Collins.

our map

week	topic	skill chat	due
week 1 sept 4	<p><i>sounding the alarm</i></p> <ol style="list-style-type: none"> 1. Brynjolfsson, E., & McAfee, A. (2014). <i>The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies</i>. New York: W. W. Norton & Company. 	sign up; how to read	
week 2 sept 11	<p><i>the (un)employment debate</i></p> <ol style="list-style-type: none"> 1. Frey, C. B., & Osborne, M. A. (2017). The future of employment: how susceptible are jobs to computerisation? <i>Technological Forecasting and Social Change</i>, 114, 254–280. 2. Autor, D. H., Levy, F., & Murnane, R. J. (2003). The skill content of recent technological change: An empirical exploration. <i>Quarterly Journal of Economics</i>, 118(4), 1279–1333. 3. Mokyr, J., Vickers, C., & Ziebarth, N. L. (2015). The history of technological anxiety and the future of economic growth: Is this time different? <i>Journal of Economic Perspectives</i>, 29(3), 31–50. 4. Autor, D. H. (2015). Why are there still so many jobs? The history and future of workplace automation. <i>Journal of Economic Perspectives</i>, 29(3), 3–30. 5. Levy, F. (2018). Computers and populism: Artificial intelligence, jobs, and politics in the near term. <i>Oxford Review of Economic Policy</i>, 34(3), 393-417. 6. Mishel, L., Shierholz, H. and Schmitt, J. (2013) Don't blame the robots. Assessing the job polarization explanation of growing wage inequality, EPI-CEPR working paper. 	how to manage time as a scholar	schedule
week 3 sept 18	<p><i>AI, algorithms, and their crafters</i></p> <ol style="list-style-type: none"> 1. Dourish, P. (2016). Algorithms and their others: Algorithmic culture in context. <i>Big Data & Society</i>, 3(2), https://doi.org/10.1177/2053951716665128. 2. Thomas, S. L., Nafus, D., & Sherman, J. (2018). Algorithms as fetish: Faith and possibility in algorithmic work. <i>Big Data & Society</i>, 5(1), https://doi.org/10.1177/2053951717751552. 3. Garnett, E. (2016). Developing a feeling for error: Practices of monitoring and modelling air pollution data. <i>Big Data & Society</i>, 3(2), https://doi.org/10.1177/2053951716658061. 4. Neyland, D. (2016). Bearing account-able witness to the ethical algorithmic system. <i>Science, Technology, & Human Values</i>, 41(1), 50-76. 5. Burrell, J. (2016). How the machine ‘thinks’: Understanding opacity in machine learning algorithms. <i>Big Data & Society</i>, 3(1), 1–12. 6. Forsythe, D. E. (1993). The construction of work in artificial intelligence. <i>Science, Technology, & Human Values</i>, 18(4), 460-479. 	how to find studies and explore a literature	

week	topic	skill chat	due
week 4 sept 25	<p><i>robots at work</i></p> <ol style="list-style-type: none"> 1. Barrett, M., Oborn, E., Orlikowski, W. J., & Yates, J. (2012). Reconfiguring boundary relations: Robotic innovations in pharmacy work. <i>Organization Science</i>, 23(5), 1448-1466. 2. Beane, M. (2018). Shadow learning: Building robotic surgical skill when approved means fail. <i>Administrative Science Quarterly</i>. http://dx.doi.org/10.1177/0001839217751692. 3. Beane, M., & Orlikowski, W. J. (2015). What difference does a robot make? The material enactment of distributed coordination. <i>Organization Science</i>, 26(6), 1553-1573. 4. Mutlu, B., & Forlizzi, J. (2008). Robots in organizations: the role of workflow, social, and environmental factors in human-robot interaction. In <i>Proceedings of the 3rd ACM/IEEE international conference on Human robot interaction</i> (pp. 287-294). ACM. 5. Lee, M. K., Kiesler, S., & Forlizzi, J. (2010). Receptionist or information kiosk: how do people talk with a robot? In <i>Proceedings of the 2010 ACM conference on Computer supported cooperative work</i> (pp. 31-40). ACM. 6. Sauppé, A., & Mutlu, B. (2015). The social impact of a robot co-worker in industrial settings. In <i>Proceedings of the 33rd annual ACM conference on human factors in computing systems</i> (pp. 3613-3622). ACM. 	how to assess research quality during a literature search	
week 5 oct 2	<p><i>controlled by or cleaning up after AI, robots, and algorithms</i></p> <ol style="list-style-type: none"> 1. Jhaver, S., Karpfen, Y., & Antin, J. (2018). Algorithmic anxiety and coping strategies of Airbnb hosts. In <i>Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems</i> (paper 421). ACM. 2. Levy, K. E. (2015). The contexts of control: Information, power, and truck-driving work. <i>The Information Society</i>, 31(2), 160-174. 3. Van Oort, M. (2018). The emotional labor of surveillance: Digital control in fast fashion retail. <i>Critical Sociology</i>, https://doi.org/10.1177/0896920518778087. 4. Ekbia, H., & Nardi, B. (2014). Heteromation and its (dis) contents: The invisible division of labor between humans and machines. <i>First Monday</i>, 19(6), https://journals.uic.edu/ojs/index.php/fm/article/view/5331/4090. 5. Shestakofsky, B. (2017). Working algorithms: Software automation and the future of work. <i>Work and Occupations</i>, 44(4), 376-423. 6. Roberts, S. T. (2016). Commercial content moderation: Digital laborers' dirty work. In S. U. Noble & B. M. Tynes (Eds.), <i>The Intersectional Internet: Race, Sex, Class and Culture Online</i> (pp. 147-160). New York, NY: Peter Lang. 	how to master the basics of good writing	two pages of text

week	topic	skill chat	due
week 6 oct 9	<p><i>ethics, politics, and societal concerns</i></p> <ol style="list-style-type: none"> Ananny, M. (2016). Toward an ethics of algorithms: Convening, observation, probability, and timeliness. <i>Science, Technology, & Human Values</i>, 41(1), 93-117. Introna, L. D. (2016). Algorithms, governance, and governmentality: On governing academic writing. <i>Science, Technology, & Human Values</i>, 41(1), 17-49. boyd, d., & Crawford, K. (2012). Critical questions for big data: Provocations for a cultural, technological, and scholarly phenomenon. <i>Information, Communication & Society</i>, 15(5), 662-679. Espeland, W. N., & Stevens, M. L. (2008). A sociology of quantification. <i>European Journal of Sociology/ Archives Européennes de Sociologie</i>, 49(3), 401-436. Newell, S., & Marabelli, M. (2015). Strategic opportunities (and challenges) of algorithmic decision-making: A call for action on the long-term societal effects of 'datification'. <i>The Journal of Strategic Information Systems</i>, 24(1), 3-14. Verbeek, P.-P. (2009). Ambient Intelligence and persuasive technology: The blurring boundaries between human and technology. <i>Nanoethics</i>, 3(3), 231-242. 	how to refine an RQ or hypothesis	RQ or hypothesis
week 7 oct 16	<p><i>changing organizations</i></p> <ol style="list-style-type: none"> Schildt, H. (2017). Big Data and organizational design—the brave new world of algorithmic management and computer augmented transparency. <i>Innovation</i>, 19(1), 23-30. Constantiou, I. D., & Kallinikos, J. (2015). New games, new rules: Big Data and the changing context of strategy. <i>Journal of Information Technology</i>, 30(1), 44-57. Valentine, M. A., Retelny, D., To, A., Rahmati, N., Doshi, T., & Bernstein, M. S. (2017, May). Flash organizations: Crowdsourcing complex work by structuring crowds as organizations. In <i>Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems</i> (pp. 3523-3537). ACM. Pachidi, S., Berends, H., Faraj, S., Huysman, M., & van de Weerd, I. (2014). What happens when analytics lands in the organization? Studying epistemologies in clash. <i>Academy of Management Proceedings: Vol. 2014, No. 1</i>, (pp. 15590-). AOM. Günther, W. A., Mehrizi, M. H. R., Huysman, M., & Feldberg, F. (2017). Debating big data: A literature review on realizing value from big data. <i>The Journal of Strategic Information Systems</i>. Galbraith, J. R. (2014). Organizational design challenges resulting from big data. <i>Journal of Organization Design</i>, 3(1): 2-13. 	sign up; how to structure an argument logically	

week	topic	skill chat	due
week 8 oct 23	<p><i>crowdworking/precarious work</i></p> <ol style="list-style-type: none"> 1. Deng, X., Joshi, K. D., & Galliers, R. D. (2016). The duality of empowerment and marginalization in microtask crowdsourcing: Giving voice to the less powerful through value sensitive design. <i>MIS Quarterly</i>, 40(2), 279-302. 2. Kittur, A., Nickerson, J. V., Bernstein, M., Gerber, E., Shaw, A., Zimmerman, J., ... & Horton, J. (2013). The future of crowd work. In <i>Proceedings of the 2013 Conference on Computer Supported Cooperative Work</i> (pp. 1301-1318). ACM. 3. Bergvall-Kåreborn, B., & Howcroft, D. (2014). Amazon Mechanical Turk and the commodification of labour. <i>New Technology, Work and Employment</i>, 29(3), 213-223. 4. Irani, L. (2015). The cultural work of microwork. <i>New Media & Society</i>, 17(5), 720–739. 5. Vallas, S. P., & Christin, A. (2018). Work and identity in an era of precarious employment: How workers respond to “personal branding” discourse. <i>Work and Occupations</i>, 45(1), 3-37. 6. Kalleberg, A. L. (2009). Precarious work, insecure workers: Employment relations in transition. <i>American Sociological Review</i>, 74(1), 1-22. 	how to provide helpful feedback	outline
week 9 oct 30	<p><i>specific platform work</i></p> <ol style="list-style-type: none"> 1. Lee, M. K., Kusbit, D., Metsky, E., & Dabbish, L. (2015). Working with machines: The impact of algorithmic and data-driven management on human workers. <i>Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems</i>, 1603–1612. 2. Raval, N., & Dourish, P. (2016). Standing out from the crowd: Emotional labor, body labor, and temporal labor in ridesharing. <i>Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work & Social Computing</i>, 97–107. 3. Chan, N. K., & Humphreys, L. (2018). Mediatization of social space and the case of Uber drivers. <i>Media and Communication</i>, 6(2), 29-38. 4. Lampinen, A., & Cheshire, C. (2016, May). Hosting via Airbnb: Motivations and financial assurances in monetized network hospitality. In <i>Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems</i> (pp. 1669-1680). ACM. 5. Ticona, J., & Mateescu, A. (2018). Trusted strangers: Carework platforms’ cultural entrepreneurship in the on-demand economy. <i>New Media & Society</i>, https://doi.org/10.1177/1461444818773727. 6. Moore, S., & Newsome, K. (2018). Paying for free delivery: Dependent self-employment as a measure of precarity in parcel delivery. <i>Work, Employment and Society</i>, 32(3), 475-492. 	how to determine where your work fits and write to ensure that it does	

week	topic	skill chat	due
week 10 nov 6	<p><i>work sector focus: medicine</i></p> <ol style="list-style-type: none"> 1. Cohen, I. G., & Graver, H. S. (2017). Cops, docs, and code: A dialogue between big data in health care and predictive policing. <i>UCDL Rev.</i>, 51, 437. 2. Prentice, R. (2005). The anatomy of a surgical simulation: The mutual articulation of bodies in and through the machine. <i>Social Studies of Science</i>, 35(6), 837-866. 3. Samuelsson, T., & Berner, B. (2013). Swift transport versus information gathering: Telemedicine and new tensions in the ambulance service. <i>Journal of Contemporary Ethnography</i>, 42(6), 722-744. 4. Nicolini, D. (2006). The work to make telemedicine work: A social and articulative view. <i>Social Science & Medicine</i>, 62(11), 2754-2767. 5. Lupton, D., & Jutel, A. (2015). 'It's like having a physician in your pocket!' A critical analysis of self-diagnosis smartphone apps. <i>Social Science & Medicine</i>, 133, 128–135. 6. Sholler, Dan. (under review, do not cite outside this course). National resistance to policy-driven digital infrastructure development: The case of the U.S. healthcare industry. 	how to integrate ideas in a literature review	
week 11 nov 13	<p><i>work sector focus: policing/ justice/ law</i></p> <ol style="list-style-type: none"> 1. Brayne, S. (2017). Big data surveillance: The case of policing. <i>American Sociological Review</i>, 82(5), 977-1008. 2. Joh, E. E. (2016). The new surveillance discretion: Automated suspicion, big data, and policing. <i>Harv. L. & Pol'y Rev.</i>, 10, 15. 3. Jefferson, B. J. (2018). Predictable policing: Predictive crime mapping and geographies of policing and race. <i>Annals of the American Association of Geographers</i>, 108(1), 1-16. 4. Lehr, D., & Ohm, P. (2017). Playing with the data: What legal scholars should learn about machine learning. <i>UCDL Rev.</i>, 51, 653. 5. Christin, A. (2017). Algorithms in practice: Comparing web journalism and criminal justice. <i>Big Data & Society</i>, 4(2), https://doi.org/10.1177/2053951717718855. 6. Haggerty, K. D., & Ericson, R. V. (1999). The militarization of policing in the information age. <i>Journal of Political and Military Sociology</i>, 27(2), 233. 	how to write a good article review and give advice to an editor	
week 12 nov 20	<p><i>work sector focus: journalism</i></p> <ol style="list-style-type: none"> 1. Cohen, N. S. (2015). From pink slips to pink slime: Transforming media labor in a digital age. <i>The Communication Review</i>, 18(2), 98-122. 2. Lewis, S. C., & Westlund, O. (2015). Big data and journalism: Epistemology, expertise, economics, and ethics. <i>Digital Journalism</i>, 3(3), 447-466. 	how to respond to reviews of your work	

week	topic	skill chat	due
	<ol style="list-style-type: none"> 3. Carlson, M. (2015). The robotic reporter: Automated journalism and the redefinition of labor, compositional forms, and journalistic authority. <i>Digital Journalism</i>, 3(3), 416-431. 4. Coddington, M. (2015). Clarifying journalism's quantitative turn: A typology for evaluating data journalism, computational journalism, and computer-assisted reporting. <i>Digital Journalism</i>, 3(3), 331-348. 5. Anderson, C. W. (2015). Between the unique and the pattern: Historical tensions in our understanding of quantitative journalism. <i>Digital Journalism</i>, 3(3), 349-363. 6. Parasie, S. (2015). Data-driven revelation? Epistemological tensions in investigative journalism in the age of "big data". <i>Digital Journalism</i>, 3(3), 364-380. 		
week 13 nov 27	<p><i>going forward: research agendas and approaches</i></p> <ol style="list-style-type: none"> 1. Faraj, S., Pachidi, S., & Sayegh, K. (2018). Working and organizing in the age of the learning algorithm. <i>Information and Organization</i>, 28(1), 62-70. 2. Seaver, N. (2017). Algorithms as culture: Some tactics for the ethnography of algorithmic systems. <i>Big Data & Society</i>, 4(2), https://doi.org/10.1177/2053951717738104. 3. Gal, U., Jensen, T. B., & Stein, M. K. (2017). People Analytics in the Age of Big Data: An Agenda for IS Research. In <i>ICIS 2017 International Conference on Information Systems</i>. Association for Information Systems. AIS Electronic Library (AISeL). 4. Bailey, Diane E. and Barley, Stephen R. 2018. Why organizational scholars of technology and work should attend to the "should" question of artificial intelligence and the future of work, 24 pgs. 20th <i>IESE International Symposium on Ethics, Business and Society</i>, Barcelona, Spain. 5. Calls and conferences: <ol style="list-style-type: none"> a. https://sites.google.com/site/workshopcnw/home/6thcnw b. http://2018conf.ifipwg82.org/ c. https://misq.org/skin/frontend/default/misq/pdf/CurrentCalls/NextGenerationIS_Full.pdf 	how to present your work verbally	
week 14 dec 4	<i>presentation and discussion of your papers</i>		presentation final paper