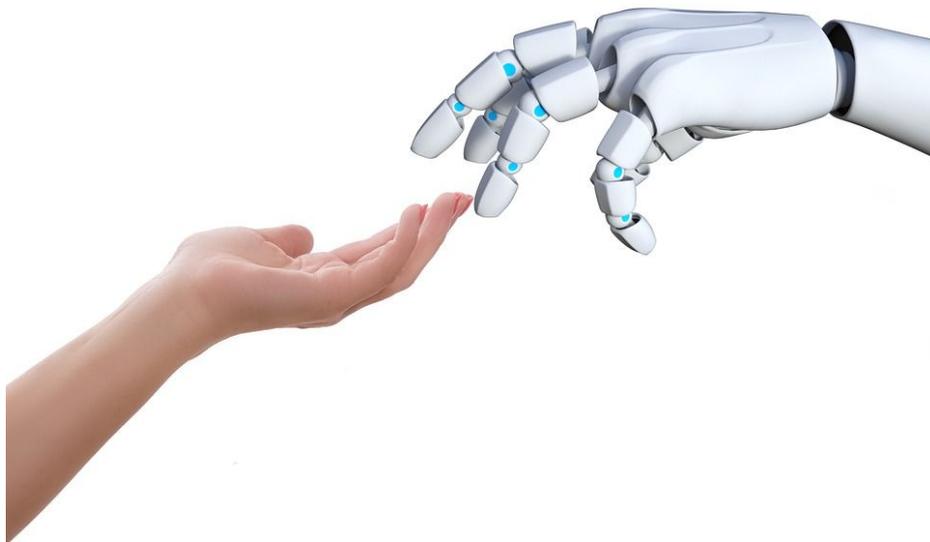
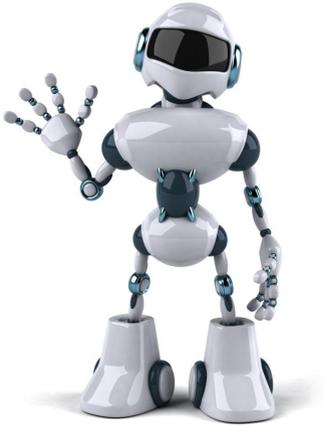


# ENG/COM 395

## Digital Rhetoric for Artificial Interactions/ Intelligence (AI)



**Your Instructor:** Nupoor Jalindre

**Semester:** FALL 2019

**Email:** [nsjalind@ncsu.edu](mailto:nsjalind@ncsu.edu)

**Location:** Tompkins 109

**Time:** T/Th 1:30pm - 2:45pm

**Credit Hours:** 3

**Prerequisites:** ENG 101

**Office Hours:** By appointment

# Course description

Most of us are familiar with chatbots, but rarely do we dig into their various layers of abstraction. These kinds of tools enable us to expand our definition of “communication” in the digital media age and help us create texts that better take advantage of the affordances of digital media for different rhetorical purposes. This course investigates human interaction with artificial intelligence (AI) systems, especially chatbots. Through close readings and provocative discussion of texts, students explore theories of rhetoric and AI in relation to topics such as identity, gender, posthumanism and culture. Along with rhetorical analysis, students will also learn to build chatbots using latest tools and technologies. The design components enable students to visualize socio-technical networks in the making of chatbots, develop algorithmic structures and test their design for diverse audiences. This class thus focuses on both rhetorical theory and praxis to help in redefining what information design means for artificial intelligence platforms.

## Learning outcomes

- Critically identify and analyze rhetorical situations
- Visualize various technical genres and their connections with the audience, interface, technology, design and developers
- Demonstrate understanding of human experience through interactions with conversational interfaces
- Create an AI application by constructively applying a rhetorical perspective to
- Evaluate digital texts like AI applications



## Course requirements

- Score above 59 in total from all assignments for passing this course
- Participate in all class sessions. Finish reading all materials for classes and come to the class with relevant questions, comments and ideas that can enhance class discussions.

## Course materials

- The class schedule, assignment descriptions, announcements and grades for the class will be shared on Moodle.
- All the reading materials will be made available as PDFs or website links on Moodle.
- Bring your own device (**BYOD**) to go through and understand the materials.
- BYOD also required for workshop sessions in class. You can [borrow technology from the libraries](#) in case you have trouble getting your own.
- **Technology used** (apart from software available through NC State’s Google ID)
  - Twine, Github, Python, Anaconda IDE.

# Evaluation of learning outcomes

- **Presentations (group) (10%+10%)**

You will define and explain any one the assigned rhetorical concept from the list: appeals, canons, proofs (ethos, logos, pathos), figures (antithesis, repetition, progression), tropes (metonymy, synecdoche, metaphor) using visual aids. Illustrate the concept that you chose in an analysis of a scientific or technical issue or controversy. Pose two or three questions to get our conversation started about the topic.

- **Visualizing an information network (individual) (15%)**

A network is a collection of data where the entities within that data are related through the principles of connection and/or containment. Digital texts that provide information, like websites, social media posts, scientific and technical papers, brochures, billboards, are all complex networks whose primary components are designers, audience and tools used to create them. In this assignment, you will use a data visualization tool to map the network and name its different components.

- **Project work (group) (50%)**

Create a chatbot employing rhetorical and information design principles studied in class.

- **Phase 1:** Defining goals and personality of chatbot (10%)

Identify audience, Facebook page to host the chatbot and information delivery goals to be achieved using the chatbot. Create personality for chatbot which will define the style and language choices that you make.

- **Phase 2:** Developing stories (15%)

Based on the goals, create conversation stories. Identify information topics, keywords for queries. Develop static content like welcome and error messages.

- **Phase 3:** Making connections (15%)

Map the conversations using networked connections that set the flow of information. Conditional structures will be determined in this phase.

- **Phase 4:** Deploying and testing (10%)

Deploy the project on the page. Test the chatbot's ability to respond to different kinds of audience (*accessibility*) and quality of conversations (*usability*). Feed failed conversations back into the chatbot's design.

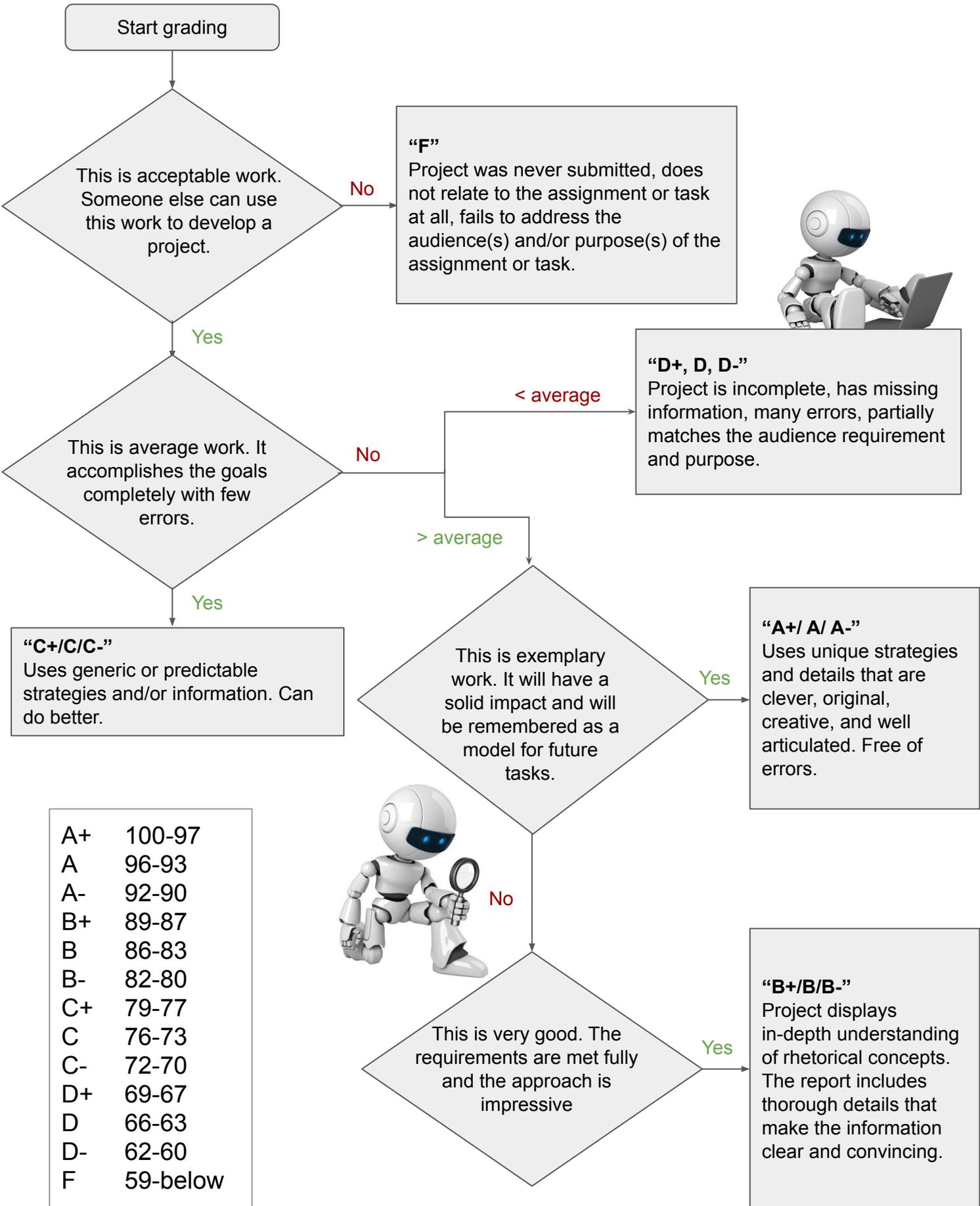
- **Presentation on final paper and reflection (individual) (10%)**

In the presentation, you will demonstrate your chatbot and discuss the design elements. Write a reflection report to justify all the decisions you made while building the project. This report will serve as documentation for future reference.

- **Participation (individual) (5%)**

Participation in class and excursions.

# Grade distribution and expectations



A+	100-97
A	96-93
A-	92-90
B+	89-87
B	86-83
B-	82-80
C+	79-77
C	76-73
C-	72-70
D+	69-67
D	66-63
D-	62-60
F	59-below

# Course Policies



## Accessibility



I will do my best to accommodate any reasonable request from students with verifiable disabilities. In order to take advantage of available accommodations offered by the University and the department, students must register with Disability Services for Students at 1900 Student Health Center, Campus Box 7509, 515-7653. While I am happy to help with your needs, it is your responsibility to notify the Disability Services and me of any problems. Please notify us as early as possible in the semester for the most efficient and adequate help. If you have trouble at any point in class, don't hesitate to reach out immediately.

## Diversity



I would like to create a learning environment for my students that supports a diversity of thoughts, perspectives and experiences, and honors your identities (including race, gender, class, sexuality, religion, ability, etc.) To help accomplish this:

- If you have a name and/or set of pronouns that differ from those that appear in your official records, please let me know via email.
- If you feel like your performance in the class is being impacted by your experiences outside of class, please don't hesitate to come and talk with me. I want to be a resource for you. Remember that you can also submit anonymous feedback (which will lead to me making a general announcement to the class, if necessary to address your concerns). If you prefer to speak with someone outside of the course, you can contact the [Office for Institutional Equity and Diversity](#).
- I am still in the process of learning about diverse perspectives and identities. If something was said in class (by anyone) that made you feel uncomfortable, please do not hesitate to reach out to me.

# Course Policies



<p><b>Academic Integrity</b></p> 	<p>The Departments of English and Communication are committed to upholding the University's honor code. To read the University policy on academic integrity please see the <a href="#">Code of Student Conduct</a>. The University and the Depts. of English and Communication assume all students are familiar with these standards and procedures. If you have any questions about academic dishonor or doubts about what constitutes a violation please contact me.</p>
<p><b>Communication Guidelines</b></p> 	<p>Email is the best way to contact me. You can email me at <a href="mailto:nsjalind@ncsu.edu">nsjalind@ncsu.edu</a>. I do not respond to students at any other address. I will try to answer student email within 24 hours on weekdays and within 48 hours on weekends and holidays. You can connect through twitter <a href="#">@nupoorwriting</a>. I may not respond to other social media requests until the end of semester. I will be available to meet during my office hours and by appointment outside of those.</p>
<p><b>Absences</b></p> 	<p>I expect that you come to every meeting and act as an active participant in the class discussions. 2 absences are allowed after which 1 point from your final grade will be deducted for every absence.</p>
<p><b>Late Policy</b></p> 	<p>Late assignments will ONLY be accepted in the case of verified/documentated emergencies in accordance with the excused absence policy or this course. See the <a href="#">University Attendance Policy</a>. If, in the case of an emergency you cannot present during your scheduled time, or cannot finish your final paper, you should let me know as soon as possible. If you have reasons for an excused absence, you can still turn in the paper or re-schedule your presentation after the due date upon presentation of appropriate documentation according to the University policies.</p>

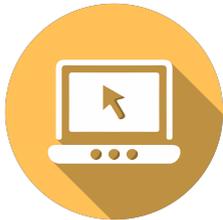
# Course Policies

## Backups

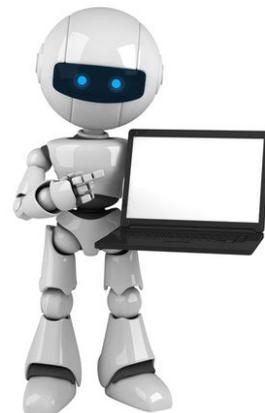


Most of our work will use technologies that let you save data on the cloud. However, save backups of your notes and all your work for this class. Recommended storage places are Google Docs and Google Drive. Printed backups can also be useful. Do not discard any files, notes, or other work until the semester is over and you have received your final grade. Be sure that you maintain backups so that you can continue your work when you encounter computer problems.

## Other resources



Make sure to participate in all the workshops held in class. If you have trouble using any tools or technologies, ask for help. If you want to learn more at other times, Lynda.com and Youtube.com are great sources. Your unity ID provides access to both these websites.



# Course Schedule



Week	Discussion and Workshop topics	Readings
<b>INTRODUCTION TO RHETORIC</b>		
0	<p>Introduction</p> <p>Situated Methods</p> <ul style="list-style-type: none"> <li>● Data Analysis</li> <li>● Information Design</li> <li>● Usability design</li> </ul>	-
1	<p>Communication Processes and Rhetorical Events, Rhetoric as a Social Practice</p> <p>Presentations on rhetorical topics.</p>	<p><i>Hauser, G. A. (2002). Introduction to rhetorical theory. Prospect Heights, Ill: Waveland Press.</i></p> <p>Chapters 1 &amp; 2</p>
2	<p>Rhetorical situation, Audience, Responses</p> <p>Visual Rhetoric</p>	<p><i>Hauser, G. A. (2002). Introduction to rhetorical theory. Prospect Heights, Ill: Waveland Press. Chapter 3</i></p> <p><i>Foss, S. K. (2012). "Framing the Study of Visual Rhetoric: Toward a Transformation of Rhetorical Theory." Defining Visual Rhetorics. 303-313.</i></p> <p><i>Kress, G. R. (2010). Multimodality: A social semiotic approach to contemporary communication. London: Routledge. Chapter 2 and 3</i></p>

# Course Schedule



Week	Discussion and Workshop topics	Readings
<b>ARTIFICIAL INFORMATION (AI) NETWORKS</b>		
3	<p>Information networks: Dissecting an information network and visualizing it (Field trip to Hunt library, activity to list all sites of visualization)</p> <p><b>Workshop:</b> Tools and technologies to create visualizations</p> <ul style="list-style-type: none"><li>● Gephi</li><li>● Netlytic</li><li>● NodeXL</li></ul>	<p><i>Freeman, L.C. (2000) Visualizing social networks. Journal of Social Structure, 1(1).</i></p> <p><i>Grandjean, M. (2016). A social network analysis of Twitter: Mapping the digital humanities community. Cogent Arts &amp; Humanities, 3(1).</i></p>
4	What is AI	<p><i>Russell, S. J., &amp; Norvig, P. (2003). Artificial Intelligence: A Modern Approach (2nd ed.). Pearson Education.</i></p> <p>Chapter 1,2 &amp; Chapter 14, 15</p>

# Course Schedule

Week	Discussion and Workshop topics	Readings
<b>CONVERSATIONAL INTER(FACES)</b>		
5	Rhetorics in AI processes	<p><i>Hunter, L. (1991). Rhetoric and Artificial Intelligence. Rhetorica: A Journal of the History of Rhetoric, 9(4), 317–340.</i></p> <p><i>Miller, C. R. (2007). What Can Automation Tell Us about Agency? Rhetoric Society Quarterly, 37(2), 137–157.</i></p>
6	<p>Appeals (Ethos, Pathos, Logos), Implications on audience and structure for AI systems</p> <p><b>Workshop:</b> Define goals for chatbot, begin learning GitHub and Python with simple projects in class</p>	<p><i>Keith, W. M., &amp; Lundberg, C. O. (2008). The essential guide to rhetoric. Boston : Bedford/St. Martin's.</i></p> <p><i>Sourcebook of rhetoric (relevant chapters)</i></p>
7	<p>Language choices &amp; Implications on audience and structure for AI systems</p> <p><b>Workshop:</b> Build algorithmic structure for chatbot</p> <ul style="list-style-type: none"> <li>● Twine</li> </ul>	<p><i>Keith, W. M., &amp; Lundberg, C. O. (2008). The essential guide to rhetoric. Boston : Bedford/St. Martin's.</i></p> <p><i>Sourcebook of rhetoric (relevant chapters)</i></p>
8	<p>Canons: Invention, Arrangement, Memory, Style, Delivery, Implications on audience and structure for AI systems</p>	
9	<p><b>Workshop:</b> Data Analysis Content analysis of live chatbot feeds to design behaviour of chatbot</p>	<p><i>MAXQDA for data analysis</i></p>

# Course Schedule



Week	Discussion and Workshop topics	Readings
<b>SOCIALIST RHETORIC</b>		
10	<p>Postmodern rhetoric, Implications on audience and structure</p> <p><b>Workshop</b></p> <ul style="list-style-type: none"> <li>● Conversational VS Quick reply systems</li> <li>● Introduction to chatbot code on Python</li> <li>● Running a simple chatbot project</li> </ul>	<p><i>Churchill, E. F., Cook, L., Hodgson, P., Prevost, S., &amp; Sullivan, J. W. (2000). "May I help you?": designing embodied conversational agent allies</i> Published in <i>Embodied Conversational Agents</i> (pp. 64–94). Cambridge, MA, USA: MIT Press.</p> <p><i>Huysen, A. (1984). Mapping the Postmodern. New German Critique, No. 33, Modernity and Postmodernity (Autumn, 1984), pp. 5-52</i></p>
11	<p>Feminism/Postmodernism</p> <p><b>Workshop</b></p> <ul style="list-style-type: none"> <li>● Designing chatbot personality</li> <li>● Creating the personality with appropriate messages in the Python code</li> </ul>	<p><i>Haraway, D. (1987). A manifesto for Cyborgs: Science, technology, and socialist feminism in the 1980s. Australian Feminist Studies, 2(4), 1–42.</i></p> <p><i>Halberstam, J. (1991). Automating Gender: Postmodern Feminism in the Age of the Intelligent Machine. Feminist Studies, 17(3), 439.</i></p>

# Course Schedule



Week	Discussion and Workshop topics	Readings
<b>CONVERSATIONAL ARCHITECTURE AND EVALUATION</b>		
12	<p>Discourse Processing</p> <p><b>Workshop</b> (Information Design)</p> <ul style="list-style-type: none"><li>• Variety of messages</li><li>• Hints (User interactions)</li></ul>	<p><i>Embodied Conversational Agents</i>. Cambridge, MA, USA: MIT Press. Chapter 2 and 4</p> <p>Morville, P., Rosenfeld, L., &amp; Rosenfeld, L. (2007). <i>Information architecture for the World Wide Web</i>. Sebastopol, CA: O'Reilly. Chapter 10: Thesauri, Controlled Vocabularies, and Metadata</p>
13	<p><b>Usability</b></p> <p><b>Workshop</b> (Usability studies)</p> <ul style="list-style-type: none"><li>• Measurement and Evaluation of Embodied Conversational Agents</li></ul>	<p><i>Embodied Conversational Agents</i>. Cambridge, MA, USA: MIT Press. Chapter 12</p> <p><a href="#">The User Experience of Chatbots</a> - Nielsen Norman Group</p>
14	<p>Accessibility studies, Implications on audience and structure of AI</p> <p><b>Workshop</b></p> <ul style="list-style-type: none"><li>• Testing chatbot</li><li>• Addressing failed interactions</li></ul>	<p><a href="#">Accessibility for People with Disabilities</a> - Facebook</p> <p><a href="#">We need to talk about Accessibility on Chatbots</a></p>
15	Presentations (Final exam)	