ENC 6428/CIS 6930 - "Data Mining & Digital Poetics"

Professors Alin Dobra & Terry Harpold
Spring 2015
Th, 4:05-7:05 PM (periods 9-11), Weil 408E

Course wiki: http://pcluster.cise.ufl.edu/dokuwiki/doku.php

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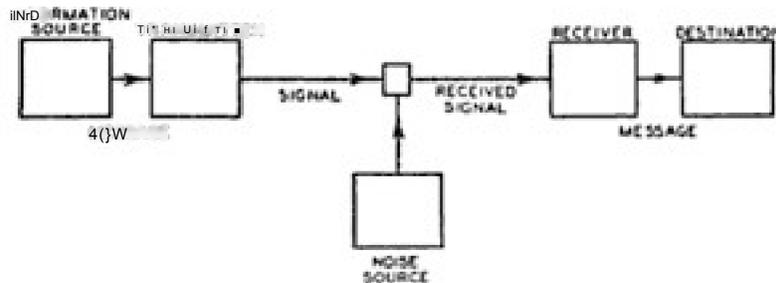email: adobra(Seise.ufl.edu *(voice preferred)*
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Claude Shannon's diagram of a general communication system. "The fundamental problem of communication is that of reproducing at one point exactly or approximately a message selected at another point. Frequently the messages have meaning; that is they refer to or are correlated according to some system with certain physical or conceptual entities. These semantic aspects of communication are irrelevant to the engineering problem. The significant aspect is that the actual message is one selected from a set of possible messages. The system must be designed to operate for each possible selection, not just the one which will actually be chosen since this is unknown at the time of design."[1]

This course, team-taught by faculty in the Departments of English and Computer and Information Science and Engineering, will place students at the intersections of large-scale data research methods, digital poetics, and literary practice.

Shannon, C.E. "A Mathematical Theory of Communication." *The Bell System Technical Journal* 27(3-4) (1948): 379-423, 623-56. Emphasis added.

In the digital field these practices are converging In new and productive ways. Researchers In data mining and Information visualization are applying powerful tools to the analysis of very large literary corpora. The emerging International canon of electronic poetry ("e-poetry") - poetry composed using computing methods and readable only on computers - Is becoming recognized as a distinctive creative form subject to new techniques of Interpretation. The era of "big data" promises to multiply and accelerate new practices of reading and writing, extending them Into new kinds of textual work.

We will read several studies of the history and present state of digital humanities and digital poetics, and an array of historical and contemporary e-poetry. Our class discussions will be supplemented by "master classes" led by leading e-poets, who will explain their methods and artistic alms. Using off-the-shelf applications, proprietary, and custom-built software we will develop a toolbox of poetic and programming techniques for mining poetic works for aesthetic Insight, for creating new works of this kind, and for rendering textual objects In new visual and Interactive forms. To make the most of our collaborative potentials, students In the course will work In groups Including computer scientists, humanists, and creative visual and verbal artists. Our aim Is to better understand operations of electronic poetry and techniques for Its analysis, and to create new works of poetry and new techniques for Its composition.

Graded assignments Include small and large creative and analytic projects, and group presentations during the semester on their progress. Presentations will culminate In an end of semester Demo Day In which the projects are showcased to course visitors. The nature of the projects - trials of e-poetic method and analysis - will be determined by research and creative Interests of the Individual groups. Course grades are based on In-class presentations and the robustness and creativity of the projects. All course-related writing will take place In a dedicated wlkl.

Familiarity with avant-garde and digital poetics, and data mining and visualization techniques and software, are not prerequisites for this course. You will need a sense of adventure, a willingness to extend your expressive Imagination, and a commitment to working collaboratively across disciplines.

Required & recommended texts

The following texts are available at the UF Bookstore and from the usual online vendors. We encourage you whenever possible to buy from Independent booksellers. If you choose to buy your texts online, we recommend sources such as Abebooks.com and Allbrls.com that serve Independent booksellers.

These texts are *required*:

> Funkhouser, Christopher T. *Prehistoric Digital Poetry: An Archeology of Forms, 1959-1995.* Tuscaloosa, AL: University of Alabama Press, 2007. ISBN 978-0817354220. Print.

Moretti, Franco. *Distant Reading.* New York: Verso, 2013. ISBN 978-1781680841. Print.

These texts are *recommended*:

Fitzgerald, Michael. *Introducing Regular Expressions.* Sebastopol, CA: O'Reilly & Associates, 2012. ISBN 978-1449392680. Print.

Turco, Lewis. *The Book of Forms: A Handbook of Poetics, Including Odd and Invented Forms.* Hanover, NH: University Press of New England, 2011. ISBN 978-1611680355. Print. **N.B.: This text - the most recent edition of Turco's classic reference - is strongly recommended. It is an invaluable resource for understanding a wide range of poetic forms, methods, and terminology.**

Other assigned and recommended readings for the course will be made available In digital formats In the course wlkl, via the WWW, or via the course's electronic reserves (Ares, https://ares.uf1lb.uf1.edu/)·

All assigned electronic poems are compatible with current versions of Mac and Windows operating systems. Some poems require an active Internet connection, some require up-to-date Flash, Java, QuickTime, and Shockwave browser plugins (depending on your system configuration, you may also be required to assign these plugins permission to run), and some require that you Install an application or additional files on your computer before the poem can be viewed. No software required for this course makes permanent alterations to your computer setup or violates UF's Mobile Computing and Storage Devices Standard.[2]

The Master Classes

Two class meetings during the semester will be led remotely by major theorists and practitioners In the field, by way of Google Hangout, In the Marston Library Conference & Visualization Room (L136). The assigned readings and poetic texts for these class meetings will be selected by the e-poets and made available In advance of the class meetings. These class meetings will be advertised on campus and open to the public.

Attendance, grading & assignments

Attendance & lateness. The texts and computing techniques we will discuss are frequently complex and challenging. You cannot reasonably expect to master them If you do not keep up with required reading assignments and come to class prepared and on time. Moreover, our discussions will often Include review of materials and technical problems not among the assigned readings. Each class meeting Is devoted to literary-historical *and* technical material; we may range freely from the assigned readings and stated emphasis of any class meeting as the threads of our conversations lead us. For these reasons, your presence In class Is essential and Is

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[2]See http://www.it.ufl.edu/policies/information-security-and-compliance/mobile-computing-storage-devices/standard/.

required. After **six missed class *periods,*** your final course grade will be reduced by five points for each additional class period that you miss.[3] Excused and unexcused absences are treated alike in this regard. It is your responsibility to keep track of your absences and to make sure that you complete all required work. If you must miss class, make sure that you turn in any assignments due for that day, and that you are ready if another assignment is due on the day you return to class. In the event of a prolonged illness or other emergency you should notify the instructors as soon as possible so that we may make provisions to insure that you do not fall behind.

Lateness is disruptive to others in the classroom, and is strongly discouraged. If you are more than 30 minutes late to class, this will be considered an absence.

If you have special classroom access, seating, or other needs because of disability, do not hesitate to bring those to the instructors' attention so that appropriate accommodations may be made.

If you are unable to attend any part of a class meeting or work on a course assignment because these coincide with the timing of religious observances, you must notify the instructors of this conflict well in advance, so that we may make appropriate adjustments to relevant assignment deadlines.

The use of computers and other electronic devices in class. You may use personal computers and other electronic devices in class for purposes related to class discussion and collaboration. Indeed, the use of these tools is essential to our in-class collaboration. Casual WWW browsing, emailing, chatting, texting, etc., unrelated to classroom activities will not be tolerated. Cell phones, pagers, and similar communication devices may not be used during class meetings, and must be set to silent ring at the start of class.

The course wiki. All written work for the course will take place in a dedicated wiki that supports collaborative review and editing of the documents we will create during the semester. The wiki platform we will use is DokuWiki, a standards compliant Open Source (GPLv2) software with a robust but simple syntax. Early in the semester we will review wiki methods and their best uses. The course wiki is hosted at http://pcluster.cise.ufl.edu/dokuwiki/doku.php.

The wiki is *not* open to the public, i.e., visible on the open Internet. Only the instructors, students registered in this course, and guest speakers, are able to access documents posted on it.

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[3] Our course meets once a week for *three* class periods. Therefore, if you miss two class meetings, your final grade may be reduced for any additional absences.

Grading scheme and graded assignments. Grades are calculated on a numeric scale, as below:

A 90-100	A- 87-89	
B+ 84-86	B 80-83	B- 77-79
C+ 74-76	C 70-73	

If you feel that you've been unfairly graded on an assignment, you may make a case in writing for a better grade. We will consider no grade changes without this written rationale.

You may turn in an assignment late without penalty only if you have a written medical excuse from a doctor, a signed letter from a judge or law enforcement officer (if you are called for jury duty or to testify in court, for example), or if a death or serious illness or injury occurs in your family. You should contact us as soon as possible when you anticipate a delay in submission of graded work.

Your final course grade will be determined by the average of 4 assignments, each worth a different portion of the final grade:

- Regular expression poetry experiment: 10% of final grade
- Workgroup project progress presentations (2 presentations): 20% + 20%
- Workgroup project: 50%

The regular expression poetry experiment will be completed individually by each student. The other assignments are collaborative undertakings of workgroups comprised of 3-4 students each. We will notify you early in the semester to which workgroup you have been assigned. Workgroup members are encouraged to begin meeting and corresponding with each other regularly as soon as these assignments are made, in order to plan their projects and decide on divisions of labor. Groups should begin work on their projects as soon as possible after the requirements of each assignment has been made clear.

There are no other graded assignments in the course.

Format, topics, & due dates of writing assignments. All writing associated with course assignments must follow guidelines regarding format and citation methods that we will post on the wiki and discuss in class.

Read & respond to everything. The historical, critical, and technical reading load in this course is substantial but not onerous. Most of this material will be read in the first month of the semester. Similarly, in the first half of the semester the class will read and discuss the work of several important electronic poets. The remainder of the semester will be devoted to collaborative work undertaken by your workgroup. The emphases and direction of our discussions in the second half of the semester will be driven by the research interests of the students and technical and methodological problems that emerge during the development of

group projects. The seminar model, and in particular the collaborative method of a wiki-based seminar, works best if everyone takes part in the conversation. You will be able - and encouraged - to comment in the wiki on all reading assignments and other students' work, even if that material hasn't been formally assigned to you.

Workgroup projects. A few weeks into the semester, groups will be asked to propose the projects to which the bulk of each group's time will be devoted in the latter part of the semester. Project proposals, including descriptions of each project's poetic and technical rationales and aims, method and technical requirements, and anticipated significance, will be posted in the course wiki, where all members of the course will be free to offer their observations and advice. Groups may begin working on the projects after they have been approved by the instructors. Details of the project proposal and approval process will be reviewed in class early in the semester.

Project presentations. Class meetings during the final month of the semester will be devoted to reports by workgroups on their projects' progress. The reports will include written documentation posted in the course wiki and in-class presentations. Each workgroup will present its project(s) in class *twice,* at two-week intervals.

A note on collaborative assignments. Productive collaborative work is seldom easy. Students often worry that their individual grades may suffer as a result of breakdowns in communication within groups or the failures of some group members to complete quality work on a project. We have built mechanisms into the course to reduce the risk of this happening. Moreover, the openness of the wiki - everyone in the course can be aware of your contributions to your group's projects or lack thereof - tends, in our experience, to promote students' good faith efforts within their groups and in relation to the class as a whole. The most important things you can do to insure that your workgroup's performance is effective is to define any assigned tasks within the group well in advance, stick to a calendar for your work together, and take full advantage of the wiki's editing and revision features to improve the quality of the group's collective writing.

Keep in mind that the wiki environment includes audit trailing functions that enable us to track the frequency and extent of every student's written contributions. In the event that a student within a workgroup fails to participate in the group's efforts or to otherwise fulfill her or his obligations to the group, we reserve the right to reduce that student's grade on a given assignment and, in some cases, to adjust the rest of the group's grade on the assignment accordingly.

If for any reason you feel that members of your group are not efficiently or appropriately working together, you should alert us to such difficulties through private emails or conversation as soon as possible.

Privacy of grades and other assessments of your performance. The guiding principal of our uses of the wiki in this course is one of *peer access*: in brief, others in the course will be able to review much of your written work and most of your exchanges with us regarding your work. They will be able - and encouraged - to comment on your work and these exchanges, with the aim of enlarging our shared understanding of the texts and critical-theoretical problems we will discuss.

This public aspect of your contributions to the wiki does not include grading of your performance in the course. We have designed the course grading methods to insure that such evaluations of your work are known only to the three of us, and will be communicated only by channels that will guarantee your privacy in this regard.

Grades for group projects will communicated by way of similarly privileged channels; only the members of each group and the instructors know that group's grade for a given project. Should it become necessary to adjust a student's grade because of poor performance in a group project, only that student will be notified of the change.

Our uses of online resources in this course will adhere to the University's posted policies on student data security, confidentiality, and privacy. As a student, you have defined obligations under these policies with regard to your online conduct. See http://lss.at.uf1.edu/home/privacy/ for a complete description of these policies.

Resolving date conflicts for assignments. It is essential that you notify us immediately after the assignments of projects and presentations dates have been made, if these will conflict with other commitments you may have. (For example, if the due date falls on a religious holiday.) If you wait to notify us of such conflicts we may not be able to change your assignments and your final grade may be adversely affected as a result.

Policy on academic honesty

The University community's policies and methods regarding academic honesty, your obligations to us and ours to you with regard to academic honesty, are clearly spelled out in the UF Student Honor Code, which is available online at http://www.dso.uf1.edu/sccr/honorcodes/honorcode.php.

Academic dishonesty in any form will not be tolerated in this course. Examples of academic dishonesty include but are not limited to:

- Possessing, using, or exchanging improperly acquired written or oral information in the preparation of graded assignments submitted for this course.

- Substitution of material that is wholly or substantially identical to that created or published by another individual or individuals.

• False claims of performance or work submitted by a student for requirements of this course.

Collaborative work required in this course does not fall within any of the forbidden categories listed above. Honest completion of collaborative work *does* require that you adhere to well-defined practices that acknowledge the contributions of others in a forthright and precisely documented manner.

We are obliged to act on any suspected act of academic misconduct. This may include a reduced or failing grade for the course as a whole or other disciplinary proceedings, as per the recommendation of the Dean of Students. If you have any concern that you may not have made appropriate use of the work of others in your research or writing for this course, please confer with the instructors before you submit the assignment. You should retain all graded materials that you receive from us until you receive your final course grade.

Course calendar

8 Jan *Review of syllabus & course methods*
Short introduction to e-poetry
Short introduction to data mining in the browser
Assigned reading (distributed by email before class meeting) Charles Bernstein, "The Practice of Poetics," in *Attack of the Difficult Poems* (Chicago: University of Chicago Press, 2011), 73-80.

15 Jan *Introduction to the course wiki*
Introduction to regular expressions
Assigned reading: Funkhouser, *Prehistoric Digital Poetry* (hereafter *PDP),* "Introduction," "Origination"
Recommended reading: Fitzgerald, *Introducing Regular Expressions* (browse the book to develop familiarity with basic techniques); Loss Pequeño Glazier, "Grep: A Grammar," in *Digital Poetics: The Making of E-Poetries* (Tuscaloosa, AL: University of Alabama Press, 2002), 96-103.

22 Ja n *Regular expressions poetry experiments due - in-class review of results*
Assigned reading: Moretti, *Distant Reading*

29 Jan *Assigned reading: PDP,* "Visual and Kinetic Digital Poems," "Hypertext and
Hypermedia"

Recommended reading: Jim Rosenberg, "The Interactive Diagram Sentence:
Hypertext as a Medium of Thought," *Visible Language* 30.2 (1996): 103-16
(Available at: http://www.well.com/user/ier/VL.html).

... and poems by-
Mary Flanagan, *[theHouse]* (2006) -
http://collection.eliterature.Org/l/works/f1anaean thehouse.html
Jim Rosenberg, *Diagrams Series 6* (2005) -
http://www.inframereence.org/ir/inter works.html
Stephanie Strickland and Cynthia Lawson Jaramillo, *V: Vniverse* (2002, 2014) -
http://vniverse.com

5 Feb *Review of workgroup project guidelines*
Data analysis with G rokit - Introduction to data mining from the browser

12 Feb *Assigned reading: PDP,* "Alternative Arrangements," "Techniques Enabled,"
"Codeworks," "Holography"
John Cayley, "Writing to be Found and Writing Readers," *Digital Humanities
Quarterly* 5.3 (2011). (Available at:
http://www.digitalhumanities.Org/dhq/vol/5/3/000104/000104.html).

... and poems by-
John Cayley:
Orthographies (2012 - http://programmatology.shadoof.net/index.php?
p=installation/pxl2012/pxl2012.html
Hapax Phaenomena (2012, with Clement Valla) -
http://programmatology.shadoof. net/index. php?p=installation/hapax/ha pax, html

and Nick Montfort:
The Era Canto (2015) - http://nickm.com/poems/nv2015/
Round (2013) - http://round.newbinarypress.com
The Deletionist (2013, with Amaranth Borsuk & Jesper Juul) -
http://thedeletionist.com
Sea and Spar Between (2011, with Stephanie Strickland) -
http://winteranthologv.com/?vol=3&author=montfort-strickland&title=seaandspar

19 Feb **No class meeting - Students should attend "Changing the Game," the 2015 Digital Assembly Workshop, 19 Feb (4-7 PM) and 20 Feb (9 AM-12 PM), on the UF campus (Dauer Hall 215)**

Speakers include:

Stephanie Boluk. Pratt Institute, on *"Metagaming: Videogames and the Practice of Play"*
Patrick LeMieux. Duke University, on *"Making a Metagame: Introduction to ROM Hacking and Hardware Reproduction"*
Anastasia Salter, University of Central Florida, on *"Beyond the Bridgekeeper: Exploring Narrative Games at the Margins"*

See this page for details.

26 Feb ***Workgroup project proposals due (posted in wiki)***

Master Class in e-poetry with John Cayley. Brown University
N.B.: The class will meet in the Marston Library Conference & Visualization Room (L136)
Links to assigned advance reading will be posted in the course wiki

5 Mar **No class meeting - UF Spring Break**

12 Mar ***Workgroup project proposals reviewed & commented on by instructors and students***

Master Class in e-poetry with Nick Montfort. MIT
N.B.: The class will meet in the Marston Library Conference & Visualization Room (L136)
Links to assigned advance reading will be posted in the course wiki

19 Mar *Data mining & project troubleshooting*
N.B.: TH will not be in class

26 Mar *First project progress presentations*

2 Apr *First project progress presentations*

9 Apr *Second project progress presentations*

16 Apr   *Second project progress presentations*

23 Apr   **Course Demo Day & end of semester reception**
             4-7 PM, Marston Library Conference & Visualization Room (L136)