Post-Internet

Art in the Digital Age

CP 1022-009 Research Studio II

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where: Sharp 410
when: Tues 10AM - 3PM

professor: Nick Briz
email: nbriz@saic.edu

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class website: https://netart.rocks/saic/post-net

// Course Description

"The Web represents a grand emotional, sensory, and intellectual adventure for anyone willing to explore it actively. [...] For artists, ignoring the imperative to grasp the cultural implications of the Internet means risking irrelevance. [...] As human discourse adapts to its new home, everything we do and think as human beings will be and is being shaped by new values. [...] If it's ever fair to say that anything has "changed everything," it's fair to say so about the Internet."

— Virginia Heffernan[1]

In this course we will produce "Internet aware" works that help others see the unique cultural moment we are living in. We will develop digitally literate research practices by learning how computers, the Internet and various digital systems work as well as why they work the way they do by exploring the individuals, organizations and ideas that have shaped the development of these technologies.

"The single most important thing you need in order to have a career in the arts is persistence. The second most important thing you need is talent. The third most important thing is a grounding in how the online world works. It's that Important"

— Cory Doctorow[2]

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[1] Heffernan, Virginia. *Magic and Loss: The Internet as Art*. Simon & Schuster. 2016.
[2] Doctorow, Cory. *Information Doesn't Want to Be Free: Laws for the Internet Age*. McSweeney's. 2014.

// Learning Goals

“I'd like to think that computers are neutral, a tool like any other, a hammer that can build a house or smash a skull. But there is something in the system itself, in the formal logic of programs and data, that recreates the world in its own image. (...) We think we are creating the system, but the system is also creating us. We build the system, we live in its midst, and we are changed.”

— Ellen Ullman[3]

Understanding that our technologies are never neutral, our research will not only focus on how various technologies work but also why they work the way they do by exploring the individuals, organizations and ideas that have shaped the development of these technologies throughout history.

"The coded gaze reflects the priorities, preferences and prejudices of those who have the power to shape technology"

— Joy Buolamwini[4]

Our goal is also to learn how to recognize bias in technology (embedded by the culture that produced it) and in turn understand how those technologies affect us as environments.

“You will remember from the time when you first became acquainted with a petri dish, that a medium was defined as a substance within which a culture grows. If you replace the word 'substance' with the word 'technology,' the definition would stand as a fundamental principle of media ecology: A medium is a technology within which a culture grows; that is to say, it gives form to a culture's politics, social organization, and habitual ways of thinking”

— Neil Postman[5]

Lastly, we’ll aim to make, document and present work that speaks to technology’s biases and/or effects on society as well as consider how we might influence the development of these digital environments through studio work rooted in a digitally literate research methodology.

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[3] Ullman, Ellen. *Close to the Machine: Technophillia and Its Discontents.* Macmillan. 1997.
[4] Buolamwini, Joy. *Matter of Fact* Interview with Soledad O'Brien. Sep 2018
[5] Postman, Neil. *Amusing Ourselves To Death*. Penguin. 1985.

// Assignments

Research Receipts

The Internet democratized publishing, you no longer need to work with traditional publishers (movie studios, record labels, news and academic publications) to broadcast your message to nearly half the planet. The Internet has also drastically changed how we look for and acquire information (as well as how information looks for and finds us). This is a blessing and a curse. To the latter point, the onus is now on us to verify that what we learn online is in fact true... especially before we share that info with others, or risk spreading misinformation. And so, on the Internet it has now become customary to ask those "spilling tea" to "show their receipts". Throughout the semester we'll be given prompts with specific questions or lines of inquiry to guide our research, which will turn form the foundation of the art we produce this semester. You will be expected to answer these prompts in the form of "research receipts", an online form I produced for evaluating our sources and digesting the information (here's an example).

Weekly Prompts && Discussions

Nearly every week you will be given a different prompt, sometimes these will be research prompts, other times they will be prompts for creative sketches and occasionally they will be both. At the start of class the following week a few of us (selected randomly) will share our sketches and what we learned from our research (including our receipts) for discussion in class.

Final Project

The last third of the semester will be centered around the development of your own piece of "post-internet" art, or "internet-aware" art which is about life in the digital age. Like all the artists we'll discuss this semester, you'll be producing your own creative work (in any medium) which speaks to any of the themes covered in the course. Like the various prompts/sketches we'll produce, the work should be informed by your research into this subject. You might make works that preach the promises of new technologies, or work that sounds the alarm on it's perilous consequences. You work could be political, concerned with the role technology plays in our society, or it could be personal, sharing aspects of your own relationship to tech. We'll be holding critiques for our final projects the last two weeks of class.

// Outline

01: **Feb 01: Post-Internet**

discussion: we'll be reviewing the major themes and practices which we'll be covering this semester as well as the various perspectives we'll be approaching them from, these include: networks, hacking, the web, social media, memes, remix, originality, algorithmic bias/oppression, automation, artificial intelligence, code, programming, data mining, privacy, digital rights and surveillance capitalism.

workshop: We'll discuss how hackers use Google to find all sorts of information and vulnerabilities on the Internet using special search commands known as "Google Dorks". We'll also discuss various other search engines and web search techniques that will come in handy while doing our online research this semester, as well as some of the privacy considerations we should keep in mind while using search engines like Google.

homework:
research prompt: choose a piece of digital technology you use on a daily basis (device, app, etc) and produce at least one "research receipt" on any of it's unintended side-effects. Be prepared to discuss your findings in class next week.

02: **Feb 08: Databending**

discussion: A "glitch" is an unexpected moment in a system that calls attention to that system, glitch art is anytime an artist intentionally leverages that moment, by either recontextualizing or provoking glitches. The keyword here is "intentionally", glitch art is always done on purpose but the impetus behind it varies. For some artists, these are purely formal explorations into the inherent aesthetics of the digital medium. Others are more interested in the glitch's political potential, as a tool for commenting on or questioning the systems which mediate our lives. Some artists are interested in glitch's psychedelic potential, others see the glitch as a means to explore themes of failure, chance, memory, entropy, nostalgia, identity, etc. We'll be surveying and discussing a variety of works from different glitch artists.

workshop: It’s been said that data is the new oil; data is mined and fuels the apps and services we use every day. We hear about risks to our data privacy, online tracking, data leaks, etc… but what *is* data really? One group of artists well versed in the raw data that makes up our digital world are glitch artists. Glitch artists deploy a variety of different techniques using, or rather *misusing*, a variety of different tools. At the core of the practice is a technique known as “databending”. We'll be learning these techniques both as a means of creating art and better understanding “data”, the fundamental fabric of the digital medium.

homework:
read: "Glitch Throws Shade" by Legacy Russell from Glitch Feminism: A Manifesto.
sketch: choose from one of the two glitch assignments on the class website: "wrong tool for the job" or "bug collection". Be prepared to share how you chose to respond to the prompt and any interesting artifacts resulting from the process.

03: **Feb 15: Analytical Engines**

discussion: The data we spent the past week manipulating, the raw hex code, is just an abstraction. In reality, everything we interact with in the digital world are representations of electrical signals coursing through our computer's circuits. But what does this mean? How is it all possible? Where did these computers come from? Who made them, and why? The machines of the Industrial Revolution, steam powered engines, were single-purpose; one might print newspapers while another transports cargo. The machines of the Digital Revolution, electric computers, are general-purpose, analytical engines that can record, process and create. We carry small ones in our pockets and interact with massive ones over the Internet, their ubiquity makes their unique characteristics hard to identify and their effect on our lives difficult to parse.

homework:
read: "Lovelace – The Origin" by Sydney Padua, from her comic book "The Thrilling Adventures of Lovelace and Babbage"
research prompt + sketch: choose a piece of digital technology you use on a daily basis (device, app, etc) and research it's origins, where, when and most importantly who created it? produce at least one "research receipt", and then create a portrait (in any medium) of it's inventors. Be prepared to share your portraits and discuss some of your research next week.

04: **Feb 22: WiFi Wizardry**

workshop/lecture: We do so much on our smartphones, chat with our friends, send emails, check social media, search the web; all this activity generates data. Even when we're not actively using our devices, data is constantly emanating from them on their way to cell tower antennas or WiFi routers. There is data all around us oscillating as frequencies of light invisible to the human eye, unless of course we know how to "look". We'll learn techniques hackers use to capture this data and how that data is used to hack into WiFi networks and track individuals. We'll also discuss how these hacker tools have been leveraged by artists and activists to bring attention to the wireless landscape, our electromagnetic commons.

homework:
research prompt: the electromagnetic spectrum is only one piece of the physical Internet, look into what other physical infrastructure makes up our global network, what is the Internet made of? Where is it physically located? Who owns and operates it? Produce at least one "research receipt" answering some of these questions. Be prepared to discuss your findings in class next week.

05: **Mar 01: Internet Travelog**

workshop/lecture: Artists Julian Oliver and Danja Vasiliev define the Internet as, “a deeply misunderstood technology upon which we increasingly depend.” Author Virginia Heffernan considers it to be “the great masterpiece of human civilization.” The global scale of the collaboration mirrors it’s physical size. Yet, when asked to imagine the Internet, many of us see “the cloud,” when in reality most of the physical Internet lies quietly on our ocean floors. Using network diagnostic tools made for Internet engineers and network administrators we'll learn how to map the journey our data takes across the world to produce our Internet Travelogues. Our goal is not so much to produce a perfectly accurate representation of our network traffic, but rather to make the Internet "visible" and to make interesting discoveries and observations along the way. At each step we'll discuss different works of art produced by artists (Trevor Paglen, Ingrid Burrington, Allison Burtch, and others) who made similar observations in their own research.

homework:
sketch: represent/depict the journey your particular packet took during our Internet Travelogue workshop (similar to the examples shown in class) or create a sketch that responds to a discovery made along the way (similar to the works discussed in class). Be prepared to share your work next week.

06: **Mar 08: Visiting Artist + Wikipedia**

visiting artist: We'll be virtually visited by one of the artists we discussed last week, Ingrid Burrinton, who, according to wikipeida, "is a writer and artist based out of Brooklyn, New York. She graduated from the Maryland Institute College of Art and has since had her work appear in numerous publications including The Atlantic, The Nation, and San Francisco Arts Quarterly. Burrington published Networks of New York: An Illustrated Field Guide to Urban Internet Infrastructure with Melville House Publishing in 2016. [...] Burrington is currently represented as an artist by NOME, an art gallery focused on raising awareness about current issues and based in Berlin. She is also a founding member of [the cyberfeminist collective] Deep Lab"

workshop: Introduction to Wikipedia editing with SAIC Library, in anticipation of the Art+Feminism Wikipedia Edit-a-thon taking place the following day, **Thursday, March 9, 3-7 PM Central Time** at *The LeRoy Neiman Center, 1st Floor + Zoom* *Registration is required to get the Zoom link*. Empower yourself and underrepresented artists on Wikipedia! Learn to edit and help us close the Wikipedia information gap about gender, feminism, and the arts at our **Art+Feminism Wikipedia Edit-a-thon**. Whether you've edited before or not, all are welcome to join this **free, drop-in-style event** to learn how we can work together to uplift artists on Wikipedia. The Zoom space is open to anyone who would like to participate, while the in-person space is limited to current SAIC community members.

homework:
write (or bring a previously written) artist statement, bio or net-manifesto (similar to those on the notes of the class website) to class next week to convert/code into a "hypertext"

07: **Mar 15: Hypermedia**

discussion/workshop: In 1945, an American engineer/inventor/thinker named Vannevar Bush wrote an article in the Atlantic entitled, “As We May Think,” where he described a theoretical machine for storing and retrieving information based on associations (which he argued would be more akin to the way we think than the way information was typically organized in catalogs, categories, libraries, etc) he called it the “memex.” This article influenced lots of radically minded engineers, artists and futurists who followed, including an experimental writer and filmmaker turned software designer named Ted Nelson. Inn the late 1960s he coined the term “hypertext” and created one of the first applications with linked documents, Xanadu. Despite hypertext/hypermedeia's potential for revolutionizing media, most software designers in the years that followed "imitated the conventional media of the past" as Ted Nelson put it, "paper documents (.doc, .pdf), phonograph record tracks (.mp3s, .wav) and sequential movies (.mov, .mp4), Why?!", that is until the 1990s and creation of the World Wide Web. We'll discuss how the Web came to be, how early Internet artists took advantage of it to create a new artistic medium, new exhibition/publication outlets and form global communities. We'll turn our artist statements into hypertext essays and publish them on the Web, the people's platform.

homework:
sketch: finish your hypertext pieces. Consider the tutorials for learning how to further style and add interactive content to your web site. Be prepared to share them in class next week.

08: **Mar 22: Everything is a Remix**

discussion: “The act of creation is surrounded by a fog of myths. Myths that creativity comes via inspiration, that original creations break the mold, that they are the products of geniuses, and appear as quickly as electricity can heat a filament. But creativity isn’t magic. It happens by applying ordinary tools of thought to existing materials, and the soil from which we grow our creations is something we scorn and misunderstand even though it gives us so much, and that’s copying. [...] the interdependence of our creativity has been obscured by powerful cultural ideas, but technology is now exposing this connectedness. [Today] we’re struggling legally, ethically and artistically to deal with these implications.” —Kirby Ferguson

homework:
research prompt + sketch: choose a cultural meme (as defined in class) and research it's genealogy. Then create a visual representation of it's evolution (with receipts). Consider creating and adding your own variation/contribution to the discourse. Be prepared to present your work in class next week.

09: **Mar 29: Meme Genealogies**

Everyone will present their Meme Genealogies.

homework:
research prompt: Research the past, present and future of AI (artificial intelligence). Produce at least 2 receipts, the first demonstrating AI's promise and the second discussing it's perils.

10: **Apr 05: Artificial Intelligence**

discussion/workshop: We've been producing machines that imitate people long before computers. For most of computer history we've written rules for imitating intelligence, which is to say we've programmed AI: if this happens, then do that. Today, however, we train AI through a process called "machine learning." These Artificial Neural Networks were designed in the 1970s, but were not realized until recently because of the immense amount of data and processing power required to train one. Thanks to the demands of graphics-hungry gamers and the deep reservoirs of data mined by social media companies, today we are inching exponentially closer to the "singularity." We'll be discussing the history, the algorithmic processes and implications of AI. We'll also explore some of it's creative applications.

homework:
sketch: create an AI-added work of art using one of the techniques we learned in class. Be prepared to share your work next week.

11: **Apr 12: Surveillance Capitalism**

discussion: Everything we do on the Internet generates data, every random thought we type into a search field, every location we visit with our GPS enabled phone, every document we write, message we send and even message we begin to write... but decide not to send. All this

becomes data. This data is your experience of the online world made manifest. This experience has become free raw material for hidden commercial practices of extraction, prediction and sales. Consciously or not, our new values are being shaped by the business logic of these platforms, a new economic order which has come to be known as surveillance capitalism. (Shoshana Zuboff) "Ask any kid what Facebook is for and they'll tell you, 'Facebook is here to help me make friends'. No, they're looking to figure out how to monetize peoples relationships. If you don't know what the software you're using is for, then you're not using it, but being used by it." —Doug Rushkoff

homework: write your final project proposal.

12: **Apr 19: Final Project Proposal Meetings**

I'll be meeting with everyone 1-on-1 to discuss their final project proposals. The schedule will be emailed to everyone the week before.

homework: start working on your final.

13: **Apr 26: The "Metaverse"**

discussion: Online communities have existed since the dawn of the Internet. In 1968, when the first two computers came online and before “online” meant anything to anyone, two of the Internet’s founding fathers wrote, “life will be happier for the online individual because the people with whom one interacts most strongly will be selected more by commonality of interests and goals than by accidents of proximity.” In 1973 email was the “killer app”; today it’s social media. From BBSs (Bulletin Board Systems) to subreddits, the Internet has always been about community. Most recently, the data barons of Silicon Valley have decided that the future of online communities will be the "Metaverse", a corporately colonized virtual world. "Like the word 'cyberspace', the term 'virtual reality' (VR) is now commonly used for any space created by or accessible through computers, ranging from the 3D world of a game to the Internet as an alternate 'virtual' reality constructed by a vast networked communication space." —Christiane Paul (Curator of New Media Arts at the Whitney)

homework: work on your final.

14: **May 03: Final Critiques**

We'll be critique final projects for half the class, schedules will be emailed the week before.

15: **May 10: Final Critiques**

We'll be critique final projects for half the class, schedules will be emailed the week before.

// Evaluation

credit will be determined according to the following breakdown (details for each of the projects is in the “Assignments” section of the syllabus above):

- ➔ Participation in class/group discussions 20%
- ➔ Completion of research/creative prompts (including research receipts) 30%
- ➔ Final Project (including participation in final critique) 50%

// “Grading” at SAIC

SAIC adheres to a credit/no credit grading system. The adjacent grade symbols are used to denote credit status. Undergraduate and non-degree-seeking students must achieve at least average performance in the course the traditional grade equivalent of a C or 80% in order to earn CR (credit). Graduate students must achieve the traditional grade equivalent of a B or 90% in order to earn CR (credit).

If a student would like a grade equivalent they should give you a Student Letter Grade Form, which they can request at the Registrar’s Office.

CR	Credit
NCR	No Credit
W	Withdrawal
INC	Incomplete
IP	Thesis In Progress
NR	Grade Not Reported by Instructor

Grades of INC (Incomplete) will be granted by the instructor only upon request by the student and only if the instructor believes that the student’s reason for the request is justified. Incompletes must be completed within the first two weeks of the next regular semester, or the grade will automatically be changed to NCR (no credit).

// Attendance Policy

TL:DR come to class, if you can't, communication is key

SAIC policy states that students are expected to attend all classes regularly and on time. If a student needs to miss class with reasonable cause, it is the student's responsibility to contact the professor before the date of the class being missed to receive instruction for how to make up for the missed class. **If a student misses MORE than three (communicated and excused with reasonable cause) classes, the student will be at risk of failing.**

Reasonable cause to miss a class might include:

- ➔ Illness or hospitalization (the student should contact Health Services, who will relay information to the faculty in whose class the student is enrolled)
- ➔ Family illness or death (the student should also contact their academic advisor, who can relay information to all faculty)
- ➔ professional opportunities (should be communicated to the professor && approved ahead of time)

RE:COVID:

If you feel ill, have a temperature, or develop symptoms of Covid19, **stay home**, contact the Wellness Center, and contact your instructor for a makeup assignment. If you are uncertain when it is OK to return to campus after an illness, please contact the Wellness Center. Health Services: healthservices@saic.edu and 312-499-4288. Visit the Make Together framework website for more information about our community effort to be safe and minimize the spread of illness on campus this semester.

// Accommodations for Students with Disabilities

SAIC is committed to full compliance with all laws regarding equal opportunities for students with disabilities. Students with known or suspected disabilities, such as a Reading/Writing Disorder, ADD/ADHD, and/or a mental health condition who think they would benefit from assistance or accommodations should first contact the Disability and Learning Resource Center (DLRC) to schedule a virtual appointment. DLRC staff will review your disability documentation and work with you to determine reasonable accommodations. They will then provide you and your instructors with a letter outlining the approved accommodations via email. You must request accommodations for each course before any accommodations will be

implemented. You should contact the DLRC as early in the semester as possible. The DLRC can be reached via phone at 312.499.4278 or email at dlrc@saic.edu.

// Diversity Statement

I am firmly committed to diversity and equality in all areas of campus life, including specifically members of the LGBTQ community. In this class I will work to promote an anti-discriminatory environment where everyone feels safe and welcome. I recognize that discrimination can be direct or indirect and take place at both institutional and personal levels. I believe that such discrimination is unacceptable and I am committed to providing equality of opportunity for all by eliminating any and all discrimination, harassment, bullying, or victimization. The success of this policy relies on the support and understanding of everyone in this class. We all have a responsibility not to be offensive to each other, or to participate in, or condone harassment or discrimination of any kind. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups.

// Plagiarism

Academic misconduct includes both plagiarism and cheating, and may consist of: the submission of the work of another as one's own; unauthorized assistance on a test or assignment; submission of the same work for more than one class without the knowledge and consent of all instructors; or the failure to properly cite texts or ideas from other sources. Academic misconduct also includes the falsification of academic or student-related records, such as transcripts, evaluations and letters of recommendation. Academic misconduct extends to all spaces on campus, including satellite locations and online education.
Academic integrity is expected in all coursework, including online learning. It is assumed that the person receiving the credit for the course is the person completing the work. SAIC has processes in place, including LDAP authentication, to verify student identity.

// Writing Center

Tutors are available in person and online to help students achieve their writing goals at any stage of their writing process. All students are welcome, and they can work on essays, artist

statements, application materials, presentation texts, theses, proposals, creative writing, or social media posts. The Writing Center tutors are kind, encouraging, and interested!

Hours (CST)

- Monday – Thursday: 9 AM - 7 PM
- Friday: 9 AM - 5 PM

Though drop-ins are welcome, the best way to guarantee an appointment is to schedule one, you can contact the writing center at: wcenter@saic.edu – 312-499-4138 – 116 S. Michigan Ave., 10th Floor

// Wellness Center

The SAIC Wellness Center, which includes Counseling Services, Health Services and the Disability and Learning Resource Center, is also here to support students' mental health, health and accessibility needs. You may contact them at:

- **Counseling Services**: counselingservices@saic.edu and 312-499-4271 (press 1 to speak to a counselor after hours)
- **Health Services**: healthservices@saic.edu and 312-499-4288 (After hours contact the 24-Hour Nurse Line at 877.924.7758)
- **Disability and Learning Resource Center**: dlrc@saic.edu and 312-499-4278