Daniel James Miller

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EXPERIENCE

Sabbatical — *December 2018 – Present*   New York, NY
- Developed passion projects (see portfolio) with React.js, Node.js, Express, and PostgreSQL
- Improved my understanding of algorithm and data structure design through a UC San Diego edX online course

Recurse Center — *June 2018 - November 2018*   New York, NY
Participant
- Developed web applications and tools focused on generative 2D and 3D graphics and data visualisations
  - **Pretty Printing Trump Town** (https://prettyprintingtrumptown.glitch.me/) A D3.js data visualization of ProPublica's Trump Town dataset, unpacking granular data on the career histories of 2,816 Trump Administration political appointees (JavaScript (ES6), D3.js, CSS3, Python 3, NumPy, Glitch)
  - **Pretty Mes** (http://prettymes.herokuapp.com) An app to generate procedural "mesostic" poems and generative typographies from current news headlines in the style of American experimental artist John Cage (CSS3, JavaScript (ES6), Python 3, Flask, Jinja2, News API, Heroku).
  - **Faceter** (GitHub: /PleatherStarfish/Faceter) A tool for generating procedural textures and topologies by iteratively or recursively fractalizing the faces of 3D solids in Three.js and then applying coherent noise to the new vertices, similar to the Diamond-square Algorithm (JavaScript (ES6), Three.js).
- Documented my work in presentations for Recurse Center participants and faculty and in technical blog posts and tutorials on my Medium blog, published by Hacker Noon and freeCodeCamp, with over 13,000 views.

The Fulbright Program — *August 2017 - May 2018*
Fulbright-Nehru Research Fellow   Bangalore, India
- Developed open-source software (GitHub: /PleatherStarfish/DyCon_RaTish), in collaboration with South Indian classical musicians, for representing non-Eurocentric musical structures through a responsive graphic interface controlled by a real-time pitch tracking algorithm (Processing, Max/MSP, Open Sound Control (OSC))
- Created an interactive audio-video installation for the Bangalore Maker Faire using computer-vision in Processing and OpenCV-Python to control audio synthesis through persistent tracking of physical tokens

Foundry Academy — *August 2014 - September 2015*
Software and Technology Instructor   Los Angeles, CA
- Developed and taught a technology curriculum—including Python programming, Minecraft Pi (Minecraft API on Raspbian for Raspberry Pi), wearable tech, etc.—to 150 middle school students (grades 4-8) every semester

The Thomas J. Watson Foundation — *August 2013 - August 2014*
Watson Fellow   International
- One of 40 U.S. college seniors competitively funded to conduct a year-long research project overseas.
- Studied with computer artists in seven countries, documenting how "outsider" arts collectives draw on open-source technology to respond to their social and ecological environments during times of instability and upheaval

RECENT PROJECTS

Eyes Above (GitHub: /PleatherStarfish/Eyes_Above) A Chrome browser extension visualizing data about artificial satellites in a radius above the user. Generative audio sonification with Tone.js in progress (React.js, CSS)

Sunlight Bot (GitHub: /PleatherStarfish/sunlight_bot, Twitter @Sunlight_Bot) A Twitter bot that tweets public disclosure data about Trump administration appointees. (Node.js, PostgreSQL, Heroku, Twitter API)

EDUCATION

Dartmouth College — *September 2015 - June 2017*
Master of Arts, Digital Musics   Hanover, NH
- Implemented three interactive data-visualization apps in Processing and Max/MSP using Open Sound Control (OSC) to manage 2D animations controlled by data from sensor inputs, including from audio-tracking algorithms
- Defended a book-length research thesis detailing technical and design considerations for sensor-augmented live interactive computer animations, including research on public signage systems, digital maps, and UI/UX design