

Jonathan Dahan

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builds tools for developing, testing, and deploying web applications;
creates in-person interactives by networking hardware, software and phones;
designs and creates decentralized and offline-first communications tools;

work

Founder of [Baculus](#) | Winter 2018

Developed hardware and software for self-repairing disaster recovery communications infrastructure.
Built offline-first, decentralized web applications on top of scuttlebutt (js) over IPV6 link-local multicast.
Managed designers and programmers for a short sprint, winning a Mozilla/NSF phase I grant.

Technical Consultant for [Small Data Industries](#) | Winter 2017

Researched and developed preservation strategies for unique hardware such as the IBM Leapfrog and NeXT Computer.
Architected IPFS-based private cloud storage solution for The Current Museum.
Wrote GIF case study for the MoMI to highlight the historical decision-making involved in the creation of the GIF file format.
Developed documentation and code for recreation of Cory Arcangel NES hardware hacks.

Fullstack Engineer for [Micah Walter Studio](#) | Winter 2017 - Summer 2018

Built out graphql api for mid-sized museums, adapting REST ingestion api and website.

Researcher at [Recurse Center](#) | Spring 2018

Created [a programmable room](#) at Recurse Center.
Developed computer vision and shared database tools for building interactivity in a physical space.

Software Engineer for [Etsy](#) | Winter 2016 - Fall 2017

Full-stack software engineer for Etsy.com payments team.
Worked on international tax compliance for expanding to new markets, improving the payment processor state machine and api.
Decreased VAT Invoice pdf generation by 40x.
Implemented new payments state machine processes during emergency third party outage, allowing us to process over \$30 million independently of the outage.

Rogue Developer for [Bard Graduate Center](#) | Winter 2014 - Spring 2015

Created interactives for five different platforms, illustrating the differences in HCI over 30 years.
Wrote BASIC for the Commodore 64, HyperTalk for the Mac Plus, native C for the Palm Pilot Professional, javascript/canvas for iOS, and C++/openFrameworks for the kinect.
Installed and ran in public gallery for 3 months.

Adjunct Professor at [Parsons / The New School](#) | Fall 2014

Designed and taught a course for incoming design students on programming.
Covered binary numbers, data structures, file manipulation, networking, servers, drawing and interaction using p5js, nodejs, and arduino.

Rogue Developer for [Lab@Rockwell](#), [Fake Love](#) | Winter 2014 - Summer 2015

Built canvas-based frontend for malls to create digital signage for lab@rockwell. For fakelove, created backend api and email generation and queuing system to reach out to any person who interacted with an iPad frontend.

Teacher at [school for poetic computation](#) | Spring 2013, 2014

Taught classes on the raspberry pi, networking, apis, the commandline, and glitch art.

Media Technology Developer at [Metropolitan Museum of Art](#) | Spring 2012 - Summer 2014

Developed web-based virtual touchbooks and twitter in-gallery interactives.
Built collections api in node.js for external use (see Iconoclashes).
Managed 3D hackathon with two dozen artists.
Setup projector visualisations for LIARS concert in the temple of dendur.
Worked with bluetooth beacons for wayfinding in galleries.
Developed open source image recognition software.

Bit Wizard for [Bug Labs](#) | Spring 2011 - Fall 2011

Created getting started guide and tutorial application using jade, LESS and CoffeeScript for the BUG hardware prototyping platform, making it easier for new developers to quickly understand the components of the stack.
Write CoffeeScript/Mocha BDD tests for javascript libraries that interface with custom messaging platform.
Create tutorial and sample web applications using jQuery and Arduino to help new developer ramp-up.

Web Developer at [Cold Spring Harbor Labs](#) | Fall 2010-2011

Redesign and implement ruby-on-rails laboratory information management system for experimental pipeline, helping speed up data entry and retrieval.

Cluster Sysadmin at [SUNY Stonybrook Research Foundation](#) | 2007-2011

Maintain three debian-based, netbooting supercomputing clusters with a team of administrators.

Web Developer for [Chyron](#) | Summer 2008

QA test Flash / ActionScript 3 broadcast weather system, speeding up time-to-market for broadcast partners.

Developer at [Nu Horizons](#) | Summers 2003-2005

Create and maintain ASP/MSSQL parametric search systems, quiz software and parts order forms, helping keep salesman knowledge up-to-date and correct.

communities

[NYC Mesh](#) member, node operator, developer, working on security documentation, outreach and installs.

[NYC Resistor](#) member, teacher, where I built out [Baculus](#), working on CNC milling/machining and repair.

~~hacker school~~ [recurse center](#) participant, where I created a custom NES/famicom controller that could playback emulator speedruns on real hardware, build the basics of a blockchain client in rust, and learned a bit about networking layers.

[school for poetic computation](#) student and teacher

programmed and painted a [piet](#) program whose source is just a bitmap

built a [network sonifier](#) to make it easier to understand what is going on with your machine and the rest of a local network

made a collaborative light drawing robot out of an old pen plotter

Founded [Island Labs](#) hackerspace

Presided over the [Linux Users Group at Stony Brook](#)

skills

languages Rust, JavaScript, Shell, Java, C++/OpenFrameworks, C, HTML+CSS, Ruby, Python

software Linux Administration, Docker, Arduino, Processing, OSC, MIDI, git

hardware Raspberry Pi, Arduino, Android, Beaglebone Black, NES/Famicom

projects

Badge CTF There were a bunch of puzzles on the hackaday superconference badge and I managed to win the CTF!

0-Player Famicom Figured out how to do automagic playback of speedruns on an unmodified famicom/NES using an arduino. Working on sniffing the data and address busses for cart identification using a Beaglebone Black.

BadgeAssassin Built a game of [assassin](#) at [CCC](#) using the [camp badges](#) as local radar. Confused all nonparticipants.

Polyplayer Synth Creation of multi-person network/phone-controlled motors and relays using OSC and arduinos

Space Balloon Photography of the tri-state area and captured the curvature of the earth from 34,000m with over-the-shelf hardware

Exherbo Linux Packaging around 100 applications for the exherbo linux distribution, contributing to user documentation

AMD at HOPE Built API to access live position tracking of thousands of attendees of a three-day conference, enabling developers to create games on the platform

events

[Our Networks](#), [Radical Networks](#), [Hackaday Superconference](#), [Museum Computer Network](#), [EyeO Festival](#), [Museums and the Web](#), [MLG Providence](#), [Chaos Communications Camp](#), [The Last Hope](#), [The Next Hope](#)

education

Bachelors of Computer Science / Digital Arts from Stony Brook University, Fall 2010

Attended Computer Science program at Carnegie Melon University, 2005-2007