

DEVON BRAY

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Multidisciplinary Engineer with 7+ years of experience at the intersection of hardware and software.

EDUCATION:

Worcester Polytechnic Institute (WPI), Worcester, MA

Bachelor of Science in Electrical & Computer Engineering, Honors: Distinction (GPA: 3.3/4), May 2017

Minors in Computer Science & English Literature

EXPERIENCE:

- Senior Software Engineer, [TVision Insights](#), Boston, MA, June 2021 - Present
- Software Engineer, [TVision Insights](#), Boston, MA, November 2018 - June 2021

TVision is a measurement startup using IoT devices to understand how people watch TV. Developed software components that run on the fleet of 7000+ devices throughout the US and abroad. Key contributor to passive OTT device (ex. Chromecast) measurement service, and computer vision pipeline.

- Freelance Practice, [Upwork + others](#), July 2018 - Present

Operate an electromechanical prototype engineering service with clients ranging from sculpture artists to construction equipment manufacturers. Projects are typically small-batch production runs or POCs.

- Co-Founder, [Telapush LLC](#), November 2015 - June 2019

Founded company to create interactive light art installations driven by social media. Was responsible for all of hardware development and majority software development. Completed multiple commercial installations. Notable Clients: Boston Properties (BXP) at the Prudential Center, Boston New Technology.

- Engineer in Residence, [Hitchcock Management](#), Manchester, NH, May 2017 - July 2018

Led a series of research and development projects to assess the viability of given technologies to directly inform venture investments by CEO, Jeremy Hitchcock (Founder of DYN DNS).

- Measurement & Test Internship, [Corning Incorporated \(GLW\)](#), Corning, NY, May - August 2016

Created Computer Vision pipeline to measure height of catalytic converters in a production process.

- MADE@MassChallenge Internship, [MassChallenge](#), Boston, MA, June - August 2015

Ran operations of the Hardware Lab. Worked with hardware startups to develop and test prototypes.

SELECTED PROJECTS:

[visit devonbray.com for complete, media-rich portfolio](http://www.devonbray.com)

- First-Party Hardware R&D, TVision Insights, October 2022 - Present

TVision has historically relied on off-the-shelf small form factor computers and USB webcams to form the devices we send to panelists. I have been working alongside a small team to bring the production of these devices in-house, resulting in a more cost-effective, efficient and elegant solution. Represented a major scope increase for me, leveraging my electromechanical prototyping skills.

- [Packet Inspection](#) (US Patent No. US11540009B2), TVision Insights, May 2020 - Present

Engineering lead on Python service that detects and measures OTT devices. OTT devices are discovered using multicast protocols, then queried directly for content status if available. In cases where content status is not available, advanced networking analysis is used to infer content from traffic metadata. I've lead development from research project to fully productionized service.

- [The Silent Dripper](#), Freelance Practice, May 2021

Client needed a device to reliably produce droplets of water for a piece of performance art. Because the piece was to be performed in a gallery setting, little to no acoustic noise was permissible during operation, ruling out conventional DC motor pumps or solenoids. Fabricated PCB to package electronics, wrote firmware to read heartbeat sensor and drive motors, and did mechanical design and manufacturing to produce the monolithic finished actuators.

- [MK4 Digital Dashboard](#), Hitchcock Management, May 2017 - June 2018

Digital dashboard for a kit car to serve as a research platform for automotive IoT. Hardware UI implemented with touch screen and tactile buttons/switches. Gauge cluster UI and written in JavaScript on top of an Electron stack. All input/output signal processing was handled by a custom designed ATmega2560-based PCB. Bare-metal control of starter, wiper, windows, headlights and cruise control.

- [Compliant Hook Arboreal Mobility Platform \(CHAMP\)](#), WPI, August 2016 - May 2017

Tree-climbing robot designed to improve the safety and efficiency of arborist tasks. Developed software and electronics subsystems inside of the robot as well as designed and implemented the operator interface. Used distributed computing system inside the robot based on an RS485 network.

- www.esologic.com, January 2012 - Present

Catalogs the development of open-source projects. Featured on RaspberryPi.org, Lifehacker and Hackaday. Stats: 150+ posts, 120,000+ words, 400+ comments, 300,000+ pageviews.

RELEVANT SKILLS:

Software Development: Python, C/C++, Arduino, JavaScript, HTML+CSS Tools: CircleCI, Docker, Flask, QT, SYS/BIOS, Git/GitHub, Slic3r, Virtualbox, Proxmox VE // **Hardware Development:** Solidworks (certified associate) KiCAD + Freerouting, EAGLE CAD // **Manufacturing Technologies:** 3D Printing (FDM, SLA, SLS), PCB mfg through OSHPark & 7PCB as well as CNC, Lasercutter, Waterjet Cutter, 3 Axis CNC.