

# Aaron Shea

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<https://aaronshea.me>

<https://github.com/AaronShea>

- Web Development
- Tooling
- Creative Problem Solving

## WORK

### Digital Surgeons Oct. 2013 (Intern)

- Worked with design team to plan and develop an internal social network utility using Node.js.

### Digital Surgeons Jan. 2014 – Present

- Worked with a creative and technical team to develop websites and applications for multiple clients and specialized internal server-side tools.
- Assisted with engineering interactive social media installation during a live festival.
- Lead blockchain technology prototype integration with commercial C++ game engine.
- Worked with LEGO headquarters in Denmark to develop interactive web application.

## EXPERIENCE WITH

- Vue, React, Angular, SASS
- Node.js, PHP, Elixir, Phoenix, Django, Rails
- C/C++, Qt, C#
- MySQL, PostgreSQL, Redis, Docker

## OPEN SOURCE PROJECTS

### BLUI

- Integrated Chromium Embedded Framework into Unreal Engine 4.
- Cross-platform
- Awarded an Unreal Engine Developer Grant.

### HaxeFS/Faxe

- Native C bindings for the PhysicsFS and the FMOD audio engine.
- Enabled easy API usage for both under the Haxe programming language.

### Silkscreen

- Haxe tool that allowed animators to render SWF animations to transparent MOV files.
- Utilized FFMpeg as external encoder, passing data via standard pipes.

## EDUCATION

### University of Hartford

- September 2014 - May 2018 (Expected)
- BS Computer Science

## INDUSTRY PROJECTS

### Peanut, NullBrush Lab Ltd.

- Custom C++ plugin for Toon Boom Harmony.
- Exporting of a scene to an animated GIF.
- Utilized GraphicsMagick for image processing.

### Manaframe, NullBrush Lab Ltd.

- Custom C++ plugin for Toon Boom Harmony.
- Exports full-length videos without degrading color quality.
- Worked with experienced animators' feedback to create easy to use interface.
- Currently unreleased, awaiting x264 codec license.

### LEGO Star Wars Poster Builder, Digital Surgeons

- Angular single page app.
- Allowed user to custom build posters using characters from the franchise.
- Heavy SVG usage required optimization and troubleshooting to ensure a smooth user experience.

### Iridium, Digital Surgeons

- Pitched idea of integrating a consensus blockchain into game engine.
- Protobuf used as message passing between co-process blockchain node and UE4.
- Successfully encoded picking up in game item as a blockchain transaction.

### OpenShare Twitter Count, Digital Surgeons

- Wrote a micro-service to count tweets containing user specified keywords.
- Priority queued jobs and quickly needed data stored in a Redis database.
- Service used Tornado library for Python to serve API requests.
- Multi-threaded Twitter scraper made up the bulk of the application.