

Aaron Shea

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- Tooling
- Web Development
- Creative Problem Solving

EXPERIENCE

Digital Surgeons Jan. 2014 - Jan. 2018

- Worked with a team to develop multiple websites for multiple clients and specialized internal server-side applications.
- 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.

Geomagical Labs, Inc. June 2018 - Present

- Developing custom software tools for 3D applications and computer vision technology.
- Internal tooling for scientific CV research.
- Platform Engineering (Google Cloud)

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

- Graduated May 2018
- BS - Computer Science
- Magna Cum Laude

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.

Polly, NullBrush Lab Ltd.

- Custom C++ plugin for Toon Boom Harmony.
- Add-on tool that allowed drag and drop creation of polygons and star shapes.

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.