

Joseph Savell

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Education

University of Massachusetts Amherst

B.S. in Computer Science, Minor in Studio Art

Amherst, MA

Aug 2018 – Exp. Dec 2021

- 3.93 GPA; Dean's List F18, S19, F19, S20
- **Relevant Courses:** Operating Systems, Intro. Computer Architecture, Intro. Computer & Network Security, Compiler Techniques, Data Structures, Intro. Computation, Intro. Algorithms, Linear Algebra, Media & Motion Graphics

Experience

Software Engineer

Dec 2018 – Present

Center for Youth Engagement

Amherst, MA

Game Developer

Apr 2020 – Present

- Spearheaded development of 2D life simulation game for iOS textbook using Unity
- Streamlined texturing process for colored item variants by writing gradient map shader with URP Shader Graph

Backend Developer

Dec 2018 – Present

- Oversaw 4 backend projects to increase new team members' familiarity with codebase and practices
- Developed REST framework for generating member and collection resources from database models in one line, speeding up feature turnaround
- Added pagination to endpoints with large responses, reducing initial frontend load times by up to 60%

Lead Technical Artist | Tools, Pipelines, & Optimization

Jul 2020 – Present

Interactiva Studios

Remote

- Connected art and engineering teams by creating tools, establishing conventions, and communicating ideas for Unity virtual tours
- Delivered reusable UI solution for web and mobile versions of virtual art fair, allowing single configuration to be used for both targets
- Implemented runtime profiling system to auto-adjust graphical quality, achieving stable performance within 1 min of scene start
- Developed editor script to bake billboard assets from any renderer, reducing friction in optimization workflow

Projects

Procedural Remixing Web App | Python, FastAPI, Node.js, Elm, Google Cloud, Docker

Dec 2018 – Present

- Created open-source full-stack web app to remix songs automatically using beat detection
- Learned to deploy Dockerized Python service to Google Cloud Run, reducing monthly costs to \$0
- Applied caching knowledge to reduce processing times of repeat song uploads by 75% on average
- Worked with community on GitHub and Reddit to improve user experience and feature set

Video Corruptor | Python, Qt, FFmpeg

May 2020

- Developed open-source Qt/QML desktop app to make authentic glitch art effects accessible to all creators
- Learned to interface with FFmpeg programmatically and pack program resources into one file with PyInstaller
- Iterated on user feedback to simplify UX while retaining important parameters
- Achieved over 200 downloads within first 1.5 months on itch.io marketplace

Technical Skills

Proficient: Python, C#, C/C++, Unity, HTML/CSS, Git

Intermediate: Adobe CC (Photoshop, After Effects, Illustrator, Xd), Blender, JavaScript, Bash

Familiar: Maya, MEL, Substance, Unreal Engine 4, HLSL/GLSL

Interests

Software History, Workflow Optimization, Digital Painting, Hard Surface Modeling, Music Production