

Daniel Williams

Software Engineer

A highly skilled Full Stack Developer with over 10 years of experience, blending a passion for film, data science, and cutting-edge software development. I began my career in VFX as a shader writer and rendering software engineer, working with C++, Python, and Lua on productions such as *The Jungle Book*, *Passengers*, and *Pirates of the Caribbean*. These high-pressure environments demanded precision and adaptability, where mistakes could impact entire departments. As I transitioned into freelance work, I expanded my technical expertise to include languages like Go, TypeScript, and SQL, alongside working with AI models. My focus now lies in designing scalable backends and creating efficient data-driven solutions for web and big data projects that drive effective decision-making.

Work Experience

Software Developer | Freelance

January 2019 - Present

As a freelance Software Developer, I handle diverse projects using C++, Python, and Go and a little TypeScript, including:

- **Data Mining/Analysis:** Developing solutions for various industries to derive actionable insights.
- **Maya/Katana Plugin Development:** Building custom plugins to enhance VFX pipelines.
- **Responsive Website Development:** Creating and integrating frontend and backend solutions for user-friendly websites.

I focus on both backend and full stack development, continuously tackling new challenges to refine my skills.

Software Engineer | Double Negative

November 2017 - January 2019

Double Negative is a Visual Effects house with studios around the globe. My role was focused around the lighting and shading aspect of the company and the tools used by the artists.

- Supporting and updating the existing in-house Clarisse toolset.
- Managing the incoming requests made by artists for additional tools to improve their workflow.

Contact Details

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Professional Skills

Software Development
Data Analysis
Client Liaison
Team Training
Team Management
Problem Solving

Software Skills

C++
Python
Django
FastAPI
Go
Git
Typescript/CSS
RenderMan, OpenGL, Vulkan
Docker
Kubernetes
GCP/AWS/Azure
Web Development
SQL

Personal Skills

Welsh Language
Personal Training
Personal Finance

- Responsible for tracking bugs and managing the tickets made by artists for the London based studio.

Software Engineer / Shader Writer | Moving Picture Company

October 2014 - November 2017

Moving Picture Company is one of the largest Visual Effects houses in the world and provides work for Film and Advertisements.

My role was focused on developing the tools and shaders used by artists across a variety of DCCs on the many productions running at the studio at any time.

- Collaborating with global project based teams to create clean, easy to use tools for artists.
- Researching the latest papers and software to see how they may be used in house.
- Managing projects and requests made throughout a production.
- Supporting an existing in house toolset and shader library.
- Creating and maintaining new tools for artists across a range of DCCs.
- Supporting artists via ticketing system as well as face to face.
- Liaising with third party engineers when dealing with issues in their software.

Education

BSc (Hons), VFX for Animation

University of Wales, Trinity St. David

2011 - 2014

Major projects include:

- **Crowd System for Autodesk Maya:** Developed a sophisticated crowd simulation system in C++.
- **Photorealistic Glass Shader for Pixar's RenderMan:** Created a detailed, procedural glass shader in RSL.
- **Shader IDE in Python:** Designed and implemented an integrated development environment for writing and testing RSL shaders across multiple renderers.

National Diploma, I.T

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2007 - 2009

References

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Personal Projects

Offline Renderers

I have always had a keen interest in Film, and was fascinated by the technical side of animation and VFX, which leads me to always have a project of some kind on the go. Recently I have been focused on an offline renderer developed in C++ in order to further advance my knowledge of not only the latest rendering techniques, but also the most efficient ways to present data to a renderer; as this can far exceed what an average computer can handle, as well as finding efficient ways to actually perform computations on this data within a reasonable memory footprint too.

