

Tessa Power

512-949-7235 | hello@tessapower.xyz | tessapower.xyz | github.com/tessapower

SUMMARY

Computer Science graduate with software engineering and product ownership experience. Specializes in C++ graphics programming and real-time rendering systems. ISTQB-certified tester and Scrum Product Owner.

TECHNICAL SKILLS

Languages: C++14/17/20/23, Win32, C, C#, JavaScript/TypeScript, Python, Java

Graphics: DirectX 11/12, OpenGL/WebGL, ray tracing, HLSL/GLSL shaders, OpenCV, PIX, RenderDoc

Tooling: MS Unit Testing Framework for C++, Visual Studio Graphics Diagnostics, CMake, Valgrind

PROJECTS

3D Procedural Terrain | *Win32, C++, OpenGL, GLSL, DearImGui*

- Interactive and editable procedurally-generated terrain environment with real-time mesh updates.

Hydraulic Erosion Simulation | *C++, OpenGL, Physics Simulation*

- Interactive, physics-based 3D hydraulic erosion simulation with real-time updates.

Video Stabilizer | *Win32, C++, OpenCV, OpenGL, DearImGui*

- Stabilizes shaky footage using SIFT feature detection and the RANSAC algorithm.

Shader Development Playground | *WebGL, JavaScript*

- Hot-reloading, locally hosted shader playground for developing WebGL shaders.

2D Game Engine | *Entity-Component System*

- Custom game engine supporting audio, graphics, actor management, world management, and 2D physics.

TECHNICAL WRITING

Creating Realistic Terrain by Modelling the Physics of Hydraulic Erosion

- An intuitive, visual guide to the math and theory behind my hydraulic erosion simulation project.

Repurposing C++ Iterators as Geometric Generators

- A novel application of C++ iterators as geometric generators in solving a computer vision problem.

EDUCATION

Victoria University of Wellington

Bachelor of Science in Computer Science – GPA: 3.6/4.0

2020 – 2024

- Coursework included: computer graphics, rendering pipelines, ray tracing, real-time rendering, computer vision, artificial intelligence, and game engine development.

CERTIFICATIONS

C++ Institute: Certified C++ Programmer (2025)

Scrum Alliance: Scrum Certified Product Owner (2020)

ISTQB: Certified Software Tester (2019)

EXPERIENCE

Software Engineer	May 2021 – Jan 2022
<i>ShuttleRock Ltd</i>	<i>New Zealand</i>
<ul style="list-style-type: none">Organized and presented lightning talks for colleagues on topics ranging from random number generation to the fundamentals of hashing, testing techniques, and IDE/Git tips and tricks.Implemented a web-based markdown editor for embedded video frame annotations, enabling clients to format feedback and streamlining asynchronous communication between clients and creatives across timezones.Pioneered automated BDD regression suite with head of QA, reducing overall deployment lead times by 91.67%.	
Developer Intern	Jun 2020 – Dec 2020
<i>Tatou Technologies Ltd</i>	<i>New Zealand</i>
<ul style="list-style-type: none">Introduced performance monitoring in mobile applications to help reduce app loading times.	
Product Owner	Oct 2019 – Mar 2020
<i>YR Live Ltd</i>	<i>London, UK</i>
<ul style="list-style-type: none">Defined product roadmap and technical architecture for large-scale online-store platform integration.Collaborated with enterprise clients in the UK, Japan, and Sweden to integrate YR Live's on-demand print system into online store platforms.Led company-wide workshops on Scrum practices and Agile methodologies, enhancing working relationships between the project management team and the dev team by fostering transparent communication.	
Software Engineer	Sep 2018 – Oct 2019
<i>Teleportr</i>	<i>London, UK</i>
<ul style="list-style-type: none">Managed automated deployments of three iOS apps to the App Store.Developed a visualization tool for website analytics to inform critical launch decisions and resource planning.Streamlined CI/CD pipeline and reduced manual errors by integrating scripted release management.Implemented automated UI testing and performed regression testing for iOS apps.	
Mechatronics Developer Intern	Oct 2017 – Oct 2018
<i>CENIT Ag</i>	<i>Stuttgart, Germany</i>
<ul style="list-style-type: none">Commercial placement while pursuing a mechatronics degree in Germany with CENIT.Implemented in-app documentation system for features of FastSuite Edition 2, CENIT's industry-leading enterprise native Windows application for offline programming, simulation, and commissioning of industrial robotics.Developed frontend features for FastSuite Edition 2 using C#, XAML, and .NET framework.	