

# Esther Tonks

## C++ Programmer | Software Developer

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**Website:** <https://www.esther-tonks.com> **Nationality:** British with German Permanent Residency.

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- I am a British C++ application developer based in Germany with a background in producing user software in various industries.
  - I have considerable experience of developing and testing C++ applications and have a reputation for developing dependable and user friendly applications.
  - I have considerable experience of handling large code bases, and also have experience of working with 3D graphical applications.
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## Key Skills

- C++/STL
  - Software Development
  - UI
  - Teamwork
  - Software Usability
  - 3D Graphics
  - Unit/System Testing
  - Communication
  - Refactoring
  - GIT/SVN
  - Performance Analysis
  - Native English/C1 German
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## Professional Experience

**PERSONAL DEVELOPMENT/C++ PROJECT**, Berlin, Germany

**Oct 2021 – Present**

### *Intentional Career Break*

I took a planned hiatus following the COVID-19 pandemic to better establish myself in Germany and enable myself to integrate more fully into German life. I am more recently concentrating fully on my C++ programming project and looking forward to a new and exciting professional challenge.

- **I studied for and passed** the Goethe-Zertifikat C1 German exam.
- **I traveled extensively** throughout Germany.
- **I am also developing a graphical C++ project** which uses DirectX for rendering, MyGUI to handle the user interface, and SDL for window management.

**BINARY SPACES**, Berlin, Germany

**Apr 2018 – Oct 2021**

### *C++ Software Developer*

Binary Spaces specializes in developing 3D simulation software used in manufacturing industries. I was recruited as a general programmer as well as taking responsibility for the collision detection system.

- **I was responsible for maintaining, developing and bug fixing** two internal software applications, including the SDK interface, the OpenGL rendering and the collision system. I also contributed to the comprehensive suite of system and unit tests.

- **I was responsible for responding to and communicating with a leading external customer.** This involved investigating queries relating to their extensive testing of the collision system, including adding touch control using the Windows Touch API and fixing performance and other issues.

**STORECAST**, Berlin, Germany

**Dec 2017 – Jan 2018**

***Senior C++ Developer***

I joined Storecast after we concluded development on MXDN music due to funding challenges. Storecast was developing the Juke music app for MediaMarkt/Saturn and I was hired to develop and improve the cross-platform C++ API. However all app developers were made redundant very shortly after I joined as the company lost their app development contract.

**MXDN MUSIC**, Berlin, Germany

**Sept 2016 – Nov 2017**

***Mobile App Programmer and Start-up Co-founder***

MXDN music was an app start-up which aimed to gamify music creation with a fun interface which involved drawing an image and using a drag-and-drop process to layer beats onto it. I worked together with our experienced game designer and art designer on the development of the pre-existing Mixdown App demo.

- **I enhanced user experience** and extended functionality, which required learning the HAXE scripting language as well as implementing platform-specific features in Objective-C.
- **The app won the startup pitches at the STHLM Tech Meetup Pitchoff** in Stockholm in April 2017.
- **Further information** can be seen here: <https://www.esthertonks.com/index.php/projects/mixdown>

**VARIOUS**, UK and Berlin, Germany

**2014 – 2016**

***IOS Developer***

I moved into Mobile App development after the closure of Blitz Games Studios towards the end of 2013. I initially developed an app for a client as well as releasing self designed apps on the app store. I later worked on app development for Zalando in Berlin, but found that I preferred a greater technical challenge and instead participated in the development of the start-up company MXDN music with a former colleague before returning to C++.

**BLITZ GAMES STUDIOS**, Leamington Spa, UK

**2012 – 2013**

***C++ Tools and Engine Programmer***

Blitz Games Studios was well known for the Dizzy games series until their closure towards the end of 2013. I contributed to the development of internal software applications for artists and designers.

- **I rewrote their model viewer application and implemented a new GUI** in wxWidgets, in collaboration with users which allowed preview of art assets running in the game engine.
- **I played a primary role in developing an art visualiser application for Autodesk**, facilitating 3D model export and viewing across PCs and iPads via cloud storage.

- **I transitioned the internal 3D art asset format of the software to FBX loading** to improve compatibility with commercial industry products.

**UPLIVION TECHNOLOGIES**, Berlin, Germany

**2011-2012**

***Co-Founder and C++ Programmer***

I moved to Germany to help a former colleague develop the start-up company Uplivion. Uplivion had a Profund grant to develop a user-friendly API and intelligent streaming technology to enable any boxed C++ game to run in a web browser.

- **I produced work on various areas of our SDK** including a multithreaded streaming module and http package downloader, as well as bindings to allow game engines to run within a web browser.
- **Uplivion won first prize in the Businessplan-Wettbewerbs Berlin-Brandenburg** (Berlin-Brandenburg Business Plan Competition).
- **See here for more information:**  
[https://www.fu-berlin.de/campusleben/forschen/2012/120207\\_uplivion/index.html](https://www.fu-berlin.de/campusleben/forschen/2012/120207_uplivion/index.html)

**JAGEX**, Cambridge, UK

**2007-2010**

***Java Tools Developer***

Jagex is the company behind the hugely successful browser-based MMORPG Runescape. The company used its own heavily optimized proprietary Java libraries to stream art assets and enable MMO gameplay directly within web browsers, years ahead of its competitors. My responsibilities included development and maintenance of various in-house software applications for Jagex's art, design, and animation teams.

- **I worked in collaboration with users to add features** and improve functionality and usability of these tools.
- **I implemented many improvements to the usability and design of the UI** in collaboration with the art design team.

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## **Education**

**UNIVERSITY OF TEESSIDE**, UK

**BSc Visualisation: 1st Class Honors**

- **I worked as an intern C++ Tools Programmer** at Reflections (Ubisoft) for my 3<sup>rd</sup> academic year, improving and maintaining a variety of their in-house software applications.
- **C++ projects in** rendering (DirectX and OpenGL), software rasterization, Animation Programming, Visual Effects and Procedural Programming, Games Physics, AI, Maya Plugins. 3D Graphical Applied Mathematics including Linear Algebra, Vector Calculus, Differential Equations.

**UNIVERSITY OF PLYMOUTH**, UK

**BSc Geography: 2nd Class Honors**

- **Projects in Mathematical Vegetation Analysis**, Landscape and River Morphology and Process.

## **Interests**

I have developed a 3D Ray Tracer and a 3D Animation Editor in C++ which can be seen here:

<https://www.esthertonks.com/index.php/projects/ray-tracing>

<https://www.esthertonks.com/index.php/projects/animation-editor>

I very much enjoy traveling and have explored the length and breadth of Germany by train during the last two years.