

# LUCA ALEXANDRU SAS

## EXPERIENCE

### Core Systems Engineer at Creative Assembly

📅 June 2020 - Present

As part of the core systems team I work on the engine technology that powers the Total War series, aiding the evolution of the engine and optimizing existing code in a nearly 2 decades old evolving codebase. I currently work on optimizing the game using Telemetry to profile the codebase and improving memory management and algorithms.

### Open Source Developer

📅 October 2019 - Present

I developed rayfork, a C99, platform-independent game-dev library with full control over allocations, forked from raylib by refactoring over 50000 lines of code and 300 functions and improving performance.

### Raylib Contributor

📅 October 2019 - Present

I fixed low level bugs such as memory leaks, platform audio issues, buffer overflows and helped with improvements such as the removal of global variables. I also work on iOS support.

### Software Engineer at Collider Visuals

📅 November 2017 - March 2018

I ported an Unreal Engine 4 VR application created for Bottega Veneta, Alexander McQueen and Procter & Gamble to iOS.

I worked on a VR Car Configurator for Mercedes Benz, developing the architecture, companion mobile app in Kotlin & voice controls with C#.

### Software Engineer at Colegiul Pacientilor

📅 October 2015 - October 2016

Volunteered to developed a mobile app for the largest patients rights organization in Romania, using Kotlin and a C# Azure backend. It won multiple awards at InfoEducatie and Grepit.

### Graphic Designer at Colegiul Pacientilor

📅 October 2015 - Present

I created the logo and all other graphical materials using Adobe Illustrator for "Colegiul Pacientilor".

### Other Open Source Contributions:

PAR Headers	I improved the custom allocator support.
STB Image	I fixed issues with custom allocators in the gif API.
MSVC STL	I provided fixes to issues in generic C++ code.
raygui	I made the library C++ compatible.
libco	A library for coroutines in C99, forked from libco.

## SKILLS

EXPERIENCED	C++ 17 - C 99 - Java - Kotlin
PROFICIENT	Python - NodeJS - C#
ENTRY-LEVEL	Dart - Batch - Zig - Swift

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## EDUCATION

### University of Leeds - BSc Computer Science

📅 Started September 2017 - Graduating August 2020

## PROJECTS

### Rayfork

Single header, C99, cross platform, game dev library with full control over allocations. I am the lead developer.

### UK Shelters and Food Banks API

A python API that gathers information from multiple sources on shelters and food banks in the UK.

### MDCLX - VR Bike riding game

A university team project where we made a VR bike riding game in Unreal Engine 4 with a companion mobile app. I made the server-client architecture and mobile app.

### The Cell Phone Game

A mobile storytelling game initially made using Kotlin and LibGDX and rewritten in C99 using rayfork.

## ACTIVITIES

### University of Leeds Computer Society

I was Vice-President and Chair from 2017 to 2019 and organized events such as Google Hash Code, guest talks and parties and I teach students how to make games in C at the Game Dev Club.

### InfoEducatie - Judge

I have been a judge at the National Olympiad "InfoEducatie" in Romania since 2018, judging over 40 projects every year and mentoring and providing feedback to all participants.

### Talks and articles

I wrote articles on topics such as low level memory management and library design. I gave one of the most watched YouTube talks from ACCU2019 and I was accepted as a speaker at other conferences such as emBO++. I also stream coding on Twitch.

## AWARDS

2019 - University of Leeds BT Hackathon	2nd
2019 - Expedia Hackathon	3rd
2018 - University of Leeds Hackathon	1st
2018 - Google HashCode @ University of Leeds	1st
2018 - London Sky Hackathon	1st
2017 - Google Dev Group Hackathon	1st
2017 - InfoEducatie National Contest	2nd
2017 - Grepit 10 - Games	1st
2017 - Global Game Jam Romania	3rd
2016 - GrepIT 9 - Software	1st
2016 - InfoEducatie National Contest	1st