Oliver Cruickshank
Curriculum Vitae

PERSONAL DETAILS

Birthdate: December 11th 1999
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EDUCATION

Degree: University of York: Computer Science 2018 - 2021
A levels: Hills Road Sixth Form Centre 2016-2018
Achieved grades: Maths B, Physics B, Computing B, Extended Project B

GCSE: St Bede's Inter-Church School 2011-2016
Achieved grades: A A A A A A A A A B

WORK EXPERIENCE

Assistant Graphics Engineer: Metail July 2015
Helped improve the posing of the 3D human model, as well as shadowed an engineer getting an introduction to industry software engineering

PROJECTS

Fast Embree based Pathtracer 2018
Using Intel's Embree framework for high performance ray intersection tests to make a pathtracer. I wrote a simple threadpool to do tile-based rendering, a fast OBJ loader as well as progressive rendering using Win32

BMO, a language to typeset documents 2019
I designed and built a language for typesetting documents for reports and documents. It is similar to groff, producing PDFs as output that are nicely formatted. This CV was written in BMO

Pathracer from scratch for my Computer Science coursework 2017
I wrote a pathtracer from scratch which used a KD-tree for fast search for possible triangle intersections among common features like depth of field, interpolated normals, and textures

Metaprogramming Tool for C 2018
I wanted some new features for C, without having to use macros so I made a tool to add the 'defer' keyword like Go has. It uses the recursive descent parsing method.

Picoblaze 6 JIT compiler and virtual machine 2019
The Picoblaze is a soft-core CPU designed to run on Xilinx FPGAs. I wrote a compiler that generates bytecode according to their specification and then implemented a virtual machine that runs the bytecode

SKILLS

Languages C, C++, Delphi, Rust, Python

Technologies OpenGL, Embree, SIMD, CUDA, Git

Sport Trialled for GB rowing in 2017 as well as competing nationally