George Church

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EDUCATION

University of Bristol **Bristol**
MEng Computer Science (Upper Second-Class Honours) *October 2014 - June 2019*

Greenshaw High School **Sutton, London**
A levels (Maths A, Further Maths A*, Physics A, Chemistry A)* *2012 - 2014*

SKILLS

Units studied include: Data Structures and Algorithms, High Performance Computing, Machine Learning, Web Technologies, Computer Graphics, Cloud Computing, Deep Learning, Advanced Computer Architecture, Systems Security

Languages: JavaScript, Java, C#, C/C++, Python

ACADEMIC PROJECTS

Exchange Simulator (Master's Thesis) *Feb 2019 - May 2019*
- I created a simulator of a financial exchange that is based on the London Stock Exchange's Turquoise Plato trading venue.
- The simulator was created in Python.
- The simulator was created as a platform for the testing of automated trading algorithms.

Cloud Computing Project *Oct 2018 – Dec 2018*
- I created a simple, scalable web application using Node.js and Express which runs on AWS services.
- The web server is run using Elastic Beanstalk, images are stored in an S3 bucket and DynamoDB is used for the database.
- I performed load testing of the web application using Apache Jmeter in order to test its performance.

Superscalar Processor Simulator *Oct 2017 – Dec 2017*
- I created a simulator of a superscalar processor in C++.
- The simulator includes many features found in modern processors including a 5-stage pipeline, reservation stations, multiple execution units, a re-order buffer, register renaming and branch prediction.
- I also created my own simple assembly language and an assembler. I created a few assembly language programs for the processor to execute.

Game Project *October 2016 – May 2017*
- I worked in a group of six students to build an augmented reality, networked multiplayer game for iOS devices.
- The game was created with the Unity Game Engine.
- I mainly worked on the physics, game logic and networking of the game (in C#).

Web Technology Project *Feb 2017 – May 2017*
- I created a website using Node.js and the Express web framework that allows users to upload images and place comments
- SQLite was used for the database of the website to store information about uploaded images and submitted comments.
- I created a simple responsive web design with CSS so that the content is easily viewable on different screen sizes.

Computer Graphics *Feb 2017 – May 2017*

- I created a rasterizer and a raytracer in C++ using SDL and GLM.
- The rasterizer that I created performs clipping and texture mapping.
- The raytracer that I created performs antialiasing, soft shadows and bouding box optimisation.

Cotswold Water Park App *Oct 2015 – May 2016*

- I worked in a group of six students to create an app for the Cotswold Water Park.
- The app provides users with information about the water park, including a map to help them navigate their way around the area.

Interests

- I am currently learning German
- I enjoy regularly going to the gym
- Enjoy playing football and table tennis
- Enjoy learning and playing songs on the piano