George Church

((Address))

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

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

ACADEMIC PROJECTS

Financial 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 is designed to be a platform for the testing of automated trading algorithms. The simulator was created in Python. I co-wrote a paper containing my work with my supervisor that is in the process of being published.

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 in order to test its performance using Apache Jmeter.

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 assembly language and an assembler. I wrote a few assembly 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 with Node.js and the Express web framework that allows users to share images with each other. Users can create an account, upload images and place comments. SQLite is used for the database. I created a simple responsive web design with CSS so that the content is easily viewable on different screen sizes.

Computer Graphics Project *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 bounding box optimisation.

Cotswold Water Park App *Oct 2015 – May 2016*

I worked in a group of six students to create a mobile app for the Cotswold Water Park. The app provides users with information about the water park including upcoming events and has an interactive map to help users navigate their way around the area. The app was created with AngularJS, Ionic and PhoneGap.

Interests

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