1 Overbrook
West Horsley
Surrey
KT24 6BH

+44 7713 515181
github.com/trolleyman
callumgtolley.uk
callumgtolley@gmail.com

Education

University of Birmingham
2015-2019

MSc Computer Science - 1st Class

Howard of Effingham School
2008-2015

A-Level - A2s in Maths, Physics, Further Maths, Computing - AABC

GCSE - 2A* in Maths and Graphical Design, 4As including Computing

Skills

Languages: C, C++, Java, Python 2/3, PHP, HTML5, CSS3, JavaScript/TypeScript, Haskell, OCaml

Libraries: GTK+, SDL, OpenGL, Django

Tools: Git, Bash, SSH, Apache, MySQL, Unity, AWS, Pip, virtualenv, Linux, Windows

Projects

FlappyClone

I was interested in JavaScript, so I created a game that mimicked Flappy Bird over the course of a week. The game has a global leaderboard accessed using PHP, and backed by a MySQL database. The site is hosted on an AWS server.

Portal

As an experiment with OpenGL and GLFW, I created a 3D demo application that displays a scene with portals that can be looked through.

Full details of all my projects are available at callumgtolley.uk

Callum Grant Tolley

Graduated from the University of Birmingham with a 1st class MSc in Computer Science. My dissertation was based around generating AIs for the Atari 2600 using deep learning.

Enthusiastic programmer, and competent in C, C++, Java, Python, JavaScript, PHP and Rust. I have experience working in a professional environment, most recently as a Software Research Assistant with the university maintaining the supercomputer and assisting researchers with their computing projects. I have also had other software development jobs where I have demonstrated my capability of working as a team to produce high quality applications.

Experience

University of Birmingham Advanced Research Computing

Software Research Engineer   June 2018 - July 2019

Developed software to test the high performance computing cluster (BlueBEAR) at the University of Birmingham, as well as developing the front- and back-end of the website used by researchers.

Tech used: Python, Django, HTML, JavaScript, CSS, SSH, Linux.

University of Birmingham IT Innovation Centre

Software Developer   Summer 2017

Developed an educational game and promotional tool for the Lapworth Museum for use as an educational game, and a promotional tool. The game was developed to attract and engage young people in the museum exhibits.

Tech used: HTML5, CSS, TypeScript

Millennium Point

Contract Software Developer   Summer 2017

Co-created LINC, a 3D visual networking tool, for Millennium Point's CONNECT space launch. We liaised with the client to create a bespoke application where people could view other people that attended the event. A live demo can be found on my website.

Tech used: HTML5, CSS, JavaScript, Three.js

Other

Master's Dissertation

Replicated a paper from Google DeepMind about automatically generating AIs that beat Atari games using Deep Q-learning.

Tech used: TensorFlow originally, but then PyTorch.

University Team Project - Zucchini

Developed a top-down shooter game in Java using the LWJGL framework, a lightweight library that is powered by SDL and OpenGL. I was team leader and responsible for graphics. I learnt a lot about managing a team, and tried to help fellow students without being overbearing. I also learnt about how difficult OpenGL is to debug.

Tech used: Java, LWJGL, SDL, OpenGL, OpenAL.

Interests

I regularly attend hackathons, the most recent being HackTheMidlands. Our team won first prize for our hack, a VR game called "BR". I am also a RYA-certified dinghy sailing coach, and I teach sailing to kids at the local sailing club.