Holly Millea

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JavaScript Software Developer. Strong background in creative technology and mathematics, leading to an passion for 3D development and creative graphics. Experience as a lead developer, managing others and presenting to large groups. Proficient in front-end development (JavaScript, HTML, CSS) and graphics rendering (3D engines, canvas, WebGL). More at hollymillea.co.uk!

Core Skills

- **Programming languages:** Javascript, HTML, CSS Python, C, C++
- **JS Frameworks/Runtimes:** Babylon.js, React, Canvas-Sketch, Processing (p5.js), Node.js
- **Software skills:** WebGL, Maya, Unity, JIRA, Git, TortoiseSVN, Visual Studio, AWS, SVG
- **Technical skills:** Performance optimisation, UI/UX, problem solving, agile, unit/end-to-end/manual testing, product release cycle

Relevant Work

ARUP London
Software Developer 2021-Current

- Software developer for Oasys' web app, D3Plot Viewer (linked), an interactive 3D model viewer (GLB/gLTF). Using vanilla JavaScript and CSS for front-end and Babylon (JS game engine) for graphics rendering.
- Spear-headed the multiple windows enhancement, from roadmapping to implementation to release. Lead developer during this (11 month duration).
- Single-handedly re-developed the UI after a complete redesign (to be released May 2024).
- Optimised the frame-rate performance by 250%.
- Solved major ongoing (1.5yrs+) camera issues within 2 months.
- Refactored entire codebase to use object-oriented programming.

UNIVERSITY OF BRISTOL Bristol
Teaching Associate 2021

- Creator and leader of the Year 2 Academic Program: a course intended to complement and enhance the syllabus of 2nd year Computer Science students
- Designed 12 weeks of enjoyable and engaging content, teaching python and AI skills through the lense of games
- Lead, organised and managed a team of 8 TAs to ensure the delivery of the course to 200+ students, achieving a 93% attendance rate
- Content can be found at https://github.com/hollymillea/Y2Tutorials

Deputy Lead Teaching Assistant 2020

- Teaching units: CGI **(Lead TA)**, Data-Driven Computer Science, Artificial Intelligence, Robotic Systems, Mathematics for Computer Programming and Introduction to Computational Programming
- Preparing, conducting and leading lab sessions and workshops for 1st year, 3rd year and masters Computer Science students while also managing (as deputy) the team of all teaching assistants.

Education

UNIVERSITY OF BRISTOL — Bristol
MSc in Advanced Computing — 2019 –2020
Awarded with Merit (74%)

Relevant Units					
Computer Graphics	82	Animation Production	68	Character & Set Design	71
Machine Learning	94	Robotics Systems	74	Dynamics of Networks	96
Web Technologies	65	Cloud Computing	66		

Dissertation: **Super Resolution Imaging for Increased Perceptual Quality.** *Using deep learning and neural networks to create a new algorithm with increased results in up-scaling images.*

UNIVERSITY OF BATH — Bath
BSc in Mathematical Sciences — 2016–2019
Awarded with First-Class Honours (79%)

Relevant 3rd Year Units					
Artificial Intelligence	89	Advanced Computer Graphics	90	Networking	70
Computer Vision	80	Data Structure & Algorithms	78	Logic & Semantics	64
Optimisation Methods of Operation Research	80	Differential Geometry	70	Graphs & Networks	66
Relevant 2nd Year Units					
Foundations of Computation	100	Modelling and Dynamical Systems	82	Functional Programming	97

UPLANDS COMMUNITY COLLEGE — Wadhurst
A-Levels, GRADES: A*, A*, A* in Mathematics, Further Mathematics and Physics — 2009–2016
GCSEs, GRADES: 11 A*-A including Mathematics and English

Relevant Projects

- **Portfolio**
  React, Tailwind CSS, HTML
  Built my own web portfolio from scratch! See here: hollymillea.co.uk
- **Animation Production**
  Maya Studio
  Planned and actualised a 40 second animation involving a creative building of a character and a dance performance.
- **Character & Set Design**
  Maya Studio
  Designed and constructed an Olympic-themed cartoon character. Used shaders and material mapping to achieve colourised rendered shots.
- **Games within Teaching Content**
  Python
  Created mini-games from scratch to aid in teaching my curriculum. Involved a game of tic-tac-toe against AI and a classic game of snake.
- **Web**
  HTML, CSS, JavaScript
  Styled and constructed a website involving both front-end (design and style) and back-end (servers and databases) elements.
- **Computer Graphics**
  C++, Matlab
  Created both a rasterizer and renderer (in both C++ and Matlab), extending to the use of photon mapping and animation.