Sam Healer

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Employment

September 2016–present **Hewlett Packard Enterprise**, *Software Engineer*.
Part of the Cloud Bank team, designing and developing a transport layer to allow for efficient storage of deduplicated data across a number of cloud providers as part of the StoreOnce backup appliance. *Python/C*

Summer 2015 **University of Bristol**, *Research intern*.
Mood and Decision-making Study: created web-based study using jsPsych to measure respondents' reaction times to answering questions and categorising moving dots, in order to determine a link between mood, decision making ability, and drug usage. *Javascript*

Summer 2014 **The Technology Studio**, *Intern*.
Created proof of concept Glassware for Google Glass, both native (Android SDK and GDK) and using Xamarin (C#). Developed a proof of concept for an augmented reality mapping service. *C#/Java/OpenCV*

Summer 2013 **Earthware**, *Intern*.
Developed proof of concepts as part of client work for Transport for London. Created sample applications for various Google Maps tools such as custom Street View displays. *Javascript/PHP*

Summer 2012 **Earthware**, *Intern*.
Worked as part of a team on developing the road race maps for the London 2012 website. *Javascript/SQL*

Education

2012–2016 **University of Bristol - MEng Computer Science, First Class Hons**.
Late-breaking work poster accepted to SIGCHI 2016
Fintan Darragh prize for outstanding contribution to the life of the department - 2016
IPL Prize for Best Third Year Group Project - 2015
Netcraft prize for Top 10 2nd Year Students in Computer Science - 2014

2004–2011 **Haberdashers' Aske's Boys' School**.
A2 level: A* (Mathematics), A (Computing, Politics); AS level: A (Economics)
GCSE: 5 A*, 3 A, 2 B
Barclaycard Cup for Information Technology - 2010

Other Projects

2016 **Magpie**, *Masters thesis project*.
Developed a system to detect plagiarism in MIDI files efficiently and accurately, using a combination of locality sensitive hashing, a custom representation of MIDI data, and a custom distance metric based on harmonic similarity. The final system comprised both a CLI and a web interface to allow users to input either a MIDI file or draw in a melody directly on a piano roll, and was capable of ranking a dataset of 400,000 melody fragments in 10ms for similarity. *Python*

2014-2015 **Trenchmill**, *3rd year group project*.
An immersive 3D video game where the player moves through the trenches and no man's land of World War 1, using a manual treadmill to control their character, a Wiimote as a gun, and wearing a heart rate monitor to modify the game as it plays. Personally responsible for adaptive sound design, sockets and networking implementation, creating no man's land level, and general programming. *C++/Unreal Engine*

2013-2014 **BrainSlice**, *2nd year group project*.
An Android app designed to teach children about the brain. Using a 3D model, users can move their phone around someone's head to give the illusion of a window through the skull, into the brain itself. BrainSlice is available on the Google Play Store here: `https://goo.gl/cfPqtB` *Java/Android SDK*