Harry Rickards

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Education

Massachusetts Institute of Technology Cambridge, Massachusetts *June 2018 (Sophomore)*
B.Sc. Candidate, Computer Science (6-3) & Mathematics (18), GPA: 4.7/5.0
Relevant coursework: Computational Linguistics, Computational Cognitive Science

Uckfield Community Technology College East Sussex, United Kingdom *September 2007 - May 2014*
A Levels: Maths A*, Further Maths A*, Physics A*, Electronics A*, Chemistry A, ICT A

Experience

Diffeo - Boston (Machine Learning Systems Engineering Intern) *January 2016*
- Developed Named Entity Disambiguator (NED) from latest NLP research
- Created evaluation framework and Wikipedia-generated test corpus to compare NEDs

Amida Techology Solutions - Washington, D.C. (Software Developer) *May 2015 - October 2015*
- Amida uses technology solutions (primarily a MEAN stack) to solve real data problems
- Created the backend of OrangeRx, a mobile medication adherence app currently in a 10,000-patient trial
- Liased with overseas team working on the frontend

MIT Museum Studio, Holocam Project - Boston *February 2015 - May 2015*
- Developed a camera system that can be physically moved (4 degrees of freedom) around a hologram in the Museum, allowing remote users to control it in real-time via a web interface
- Worked with a wide range of technologies, from AVR C to Rails

Open Access Button (Lead App Developer) *July 2014 - May 2015*
- Performed freelance work for this not-for-profit promoting open access to scientific research
- Developed Android mobile app, Rails web app and Firefox extension for advocacy purposes

Rewired State - London (Freelance Data Developer) *July 2011 - January 2015*
- Performed data exploration, prototyping and ideation
- Worked with a range of clients from governmental, corporate and not-for-profit sectors

Various Freelancing Projects *2011 - 2013*
- Developed Moodle TV Integration plugin for UCTC
- Worked on gov.uk government portal with Government Digital Service

Projects

Shor's Circuits *Summer 2014*
Created a web-based graphical platform for symbolically simulating quantum circuits

Bioniscope *Spring 2014*
Developed the full stack (PCB to Android) of a digital sampling oscilloscope connected to a tablet interface over Bluetooth

Hackathons
Prizes and experience at more than a dozen hackathons. Notable recent ones include:
- **Young Rewired State** Honourary Winner; development of a comprehensive social-media donation platform ('donate by retweet'); 2014. Mentor and finale judge for 1300 partcipants; 2015. Centre Organizer; 2016. Assorted awards; 2010-2013.
- **National Hack the Government** Winner; applied motion detection algorithms to create a restaurant hygiene mobile app that interacts with the user completely passively (through vibrations); 2014
- **Research Councils UK Gateway to Research** Winner; used machine learning to link entrepreneurs and small businesses to academic researchers; 2014
- **Hack for Social Impact** Winner; combined financial information with Corporate Social Responsibility data to allow 'moral investment'; 2014

Skills

Languages: Javascript, Ruby, Python, C, Java, HTML/CSS, Haskell, Objective C, Verilog
Tools: vim, tmux, git, MongoDB, many APIs
Frameworks: Node, Express, Mongoose, Rails, Android, Moodle, Arduino
Operating Systems: Linux (Arch, Debian), OS X, Microsoft Windows
Computational Software: Mathematica, Matlab, R, Octave
Machine Learning Multiple years experience; online Stanford course
Hardware 3D printers (and 3D printer development), oscilloscope design, quadcopters, laser cutters