Joseph Redfern

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Education

PhD Computer Science, *Cardiff University*, Ongoing.   **2015–2019**
Working Thesis Title: "Prediction of areas of alcohol-related violence using open data and agent-based modelling"

BSc Computer Science, *Cardiff University*, 1st.   **2011–2015**
BSc Dissertation: "Video to Audio Conversion for the Visually Impaired"
Final Year Modules:
- Multimedia
- Graphics, Visualisation and Computer Vision
- Security and Forensics
- Emerging Technologies

A-Levels, *St Gerards School*.   **2009–2011**
Maths, Further Maths, Physics & Chemistry

Experience

Vocational

Technical Director (part-time),   **Feb 2017 – Ongoing**
Paperclip App Ltd., Cardiff.
My role changed from CTO to Technical Director due to PhD commitments and the expansion of the company – CTO became a full-time position. As Technical Director, I provide guidance on technical architecture, perform system administration duties and develop our internal dashboards and CRM tools.

CTO (part-time),   **Aug 2015 – Feb 2017**
Paperclip App Ltd., Cardiff.
In this role, I helped manage the outsourced development of Paperclip's mobile apps, performed system-administration roles, and developed internal dashboards to help analyse customer behaviour.

Software Engineering Intern,   **Jun 2015 – Sept 2015**
Anchor Computer Systems Ltd., Bangor.
Development of a new mobile app, replacing an existing legacy system. Mainly worked in Xamarin Forms (with some native code on the side), primarily targeting Android.

Software Engineering Intern,   **Jul 2013 – Sept 2014**
MWR InfoSecurity, Basingstoke.
Involved in several security-related development projects, including the design and implementation of a decompiler in Java, the development of an open-source mobile security assessment tool (drozer) using Python, and work involving C#, MVC4 and SQL Server. Worked in an Agile environment, with two week sprints and daily stand-ups.

Software Developer,   **Dec 2012 – Apr 2013**
Sphericore Ltd, Cardiff.
Development of a prototype geospatial intelligence gathering platform in Javascript, Drupal (PHP) and PostgreSQL

Software Engineering Intern,   **Jun 2012 – Sept 2012**
GE Aviation, Cheltenham.
Work involved debugging embedded flight software, authoring and updating technical documentation for various aircraft software components, and working with local schools to promote STEM.

Languages

English: Native Speaker

Welsh: Good

Computer skills

Python: Good knowledge, experience with Flask, Django & Celery

C# : Good knowledge, including Xamarin, NHibernate and MVC 4.0

Java: Good knowledge

PHP: Working knowledge of OO PHP, including the Laravel Framework

Matlab: Working knowledge of Matlab, including MEX

C/C++: Basic working knowledge of C/C++

Android: Experience working in multiple Android projects, good knowledge of Android security

PostgreSQL: Experience designing and maintaining multiple PostgreSQL Databases

Linux: Experience running, tuning and securing multiple Linux-based servers, using nginx, php-fpm, iptables, fail2ban and OpenVZ

Windows Server: Experience running AD Environments, including implementation of group policies, automated provisioning with WDS and Hyper-V

Teaching

Lab Tutor, *Cardiff University*, CMT303, Software Engineering (Masters).   **2015/16 & 2016/17**

Lab Tutor, *Cardiff University*, CMT205, Object-Oriented Development with Java (Masters).   **2015/16 & 2016/17**

Lab Tutor, *Cardiff University*, CM1103, Problem Solving with Python (Undergraduate).   **2016/17**

Lab Tutor, *Cardiff University*, CMT103, Information Processing in Python (Masters).   **2016/17**

Lab Tutor, *Cardiff University*, CMT302, E-Commerce and Innovation (Masters).   **2015/16**

Lab Tutor, *Cardiff University*, CM3106, Multimedia (Undergraduate).   **2015/16**

Lab Tutor, *Cardiff University*, CM3113, Computer Vision (Undergraduate).   **2015/16**

Supervisor, *Cardiff University*, CM2305, Group Project (Undergraduate).   **2015/16**

Other

- Organiser of "Open Sauce Hackathon" 2012, 2013, 2015 & 2016
- Listed on Android Security Acknowledgements page for discovering a Nexus 5 DoS vulnerability: `https://source.android.com/security/overview/acknowledgements#2014`
- Listed on eBay Responsible Disclosure Acknowledgement Page for discovering an eBay XSS Vulnerability: `http://pages.ebay.com/securitycenter/ResearchersAcknowledgement.html`
- Credited for having discovered information disclosure vulnerability on H3G Website: `http://www.theregister.co.uk/2015/06/17/three_strikes_out_sloppy_survey_after_britprivate/`
- Full UK Driving License