Andrew Garbett

Postdoctoral Researcher & Software Engineer

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TECHNICAL SKILLS

I have a keen interest in both mobile and web using API driven development with a preference for using Node.js + Vue.js and native Android for mobile application development. I have also recently begun using Docker and AWS for deploying projects.

Backend: **Node.js (Express), PHP, C#, Python**
Frontend: **Vue.js, D3.js, jQuery, CSS**
Deployment: **Docker, Vagrant**
Frameworks: **Sails.js, CakePHP, CodeIgniter**
Git Repos: https://github.com/garbit

Mobile: **Native Android, Xamarin**
Databases: **MySQL, MongoDB, Neo4j GraphDb**
Services: **Amazon S3, Twilio, Google Firebase**
Tools: **Git, Postman, Adobe**
Portfolio: http://andygarbett.co.uk

EDUCATION

PhD. Computer Science, Open Lab, Newcastle University   Sept 2012 - April 2017
Thesis: Designing Community Driven Participatory Platforms: Reconfiguring Roles, Resources, Infrastructure, and Constraints for Community Commissioning

BSc. Software Engineering - 1st Class Honours, University of Lincoln   Sept 2007 - Aug 2010
BTEC National Diploma (Level 3) IT Practitioners - A Level: A, A, A   Sept 2005 - Aug 2007

EMPLOYMENT

Research Associate - Digital Economy Research Center   Feb 2017 - Present

Open Lab, School of Computing Science, Newcastle University

➔ Lead researcher in collaboration with Newcastle United Foundation designing wearable activity trackers to engage primary school children with personal informatics.
➔ Developed distributed SMS donation platform for coordination solidarity groups in Greece.
➔ Created and delivered BBC Micro:bit curriculum to 270 primary school students in Newcastle to teach computational thinking and programming skills.
➔ Co-designed WhatFutures, a WhatsApp future forecasting game with International Federation of Red Cross and Red Crescent Society, played by 3,200 volunteers from 120 countries.

Tech: Java (Android), Xamarin, Sails.js, Angularjs, Docker, Amazon S3, Twilio, Git

Research Associate - Collections Dive Project   June 2014 - Feb 2015

Open Lab, School of Computing Science, Newcastle University

➔ Coordinated collaboration between Microsoft Research Cambridge, Tyne and Wear Archives and Museums and Newcastle University.
➔ Lead developer of novel discovery interface for exploring vast digitized museum collections.
➔ Discovery experience awarded North East Museum of Year by Journal Culture Awards 2015.

Tech: CakePHP, D3.js, jQuery, MongoDB, Neo4j Graph Database, Vagrant, Git

Interaction Design Internship   Jan 2013 - May 2013

BBC Research and Development, Salford

➔ Worked within User Experience Research group to inform design of social search and reputation system for citizen journalists within BBC.
➔ Conducted semi-structured interviews with professional journalists to understand existing practices of incorporating citizen journalists into the national news production workflow.

Research Assistant - http://sleepful.me   Dec 2010 - Feb 2013

Lincoln Social Computing Research Centre, University of Lincoln

➔ Designed and deployed large-scale social network to deliver Computerised Cognitive Behavioural Therapy for patients living with Insomnia.
➔ Developed clinically validated sleep measurement and automated sleep restriction therapy mobile application for Android platform.

Tech: Java (Android), CodeIgniter, SocialEngine (Zend), jQuery, MySQL

Trainee Developer   June 2010 - Dec 2010

Selenity (previously Software Europe), Lincoln

➔ Developed web based support ticket system for leading expenses management software company and extended existing skills to incorporate industry standard Agile development.

Tech: C#, ASP.NET, Javascript, MSSQL, Team Foundation Server

Officer Cadet   Sept 2008 - June 2010

East Midlands Officer Training Corps, British Army

➔ Completed leadership, communication, and critical thinking training as part of the Military Leadership and Development Program (Level 1 & 2) alongside my studies at university.

KEY PROJECTS

App Movement - https://app-movement.com
An online platform to enable communities to commission location-based review mobile apps
App Movement is a platform that enables communities to propose campaigns, collaboratively design their idea, and automatically generate their own location-based review mobile application in response to the community's needs. Launched in 2015 the service now has over 70,000 users who have created over 120 campaigns and automatically generated 21 mobile applications to support communities in finding: drone flying locations, gender neutral toilets, dementia friendly places, and many more.

Tech: CakePHP, MySQL, Java Android, iOS, RESTful API, Python (automated build tool), Amazon S3

IrisMSG - http://irismsg.io
A community SMS donation mobile app inspired by the Solidarity Economy
IrisMSG.io allows you to create a low-cost distributed communication network to broadcast SMS messages. Messages are sent through a network of donors who contribute their unused SMS credit to solidarity groups in Greece. As a result, the cost of communication by the organisation is significantly reduced, as well as becomes more transparent and decentralised. This approach provides an innovative alternative currency for donating latent resources to the solidarity economy.

Tech: Node.js, Angular, Xamarin, RESTful API, MySQL, Docker, Twilio, Google FCM

Collections Dive - http://www.collectionsdivetwmuseums.org.uk
Immersive discovery interfaces for online museum experiences
Collections Dive was developed in collaboration with Microsoft Research Cambridge and Tyne and Wear Archives and Museums to promote serendipitous journeys through large-scale digital museum collections. The full screen, single page immersive experience engages visitors in exploring the collection through responding intelligently to the interests and behaviour of the visitor. Scroll speed is used to predict visitor interest and thus slow, varying, or fast scroll speed alters the relatedness of artefacts presented.

Tech: CakePHP, D3.js, jQuery, Neo4j, MongoDB

FeedFinder - http://feed-finder.co.uk
Helping mothers find breastfeeding friendly locations nearby
The FeedFinder app enables new mothers to locate suitable breastfeeding locations nearby. Mothers can also rate and review the places they visit and contribute to the worldwide mapping of breastfeeding friendly locations. The app is available on both iOS and Android and has 14,000+ active users. The project has been developed in conjunction with NHS staff and new mothers in the North East of England.

Tech: CakePHP, CodeIgniter, MySQL, Java Android, iOS, RESTful API, Amazon S3

ThinkActive - http://thinkactive.io
Getting young people thinking active with wearables and the Newcastle United Foundation
In collaboration with Newcastle United Foundation the ThinkActive system promotes positive behaviour change through activity tracking in the classroom. Each child collects data through a wrist worn activity tracker which is then used to enhance the programmes offered by the NUF and provides personal informatics tracking in the classroom. The tablet application and activity trackers provide a simple method of authentication, data collection and presentation, to provide insights into activity levels of Key Stage 2 students in the West End of Newcastle.

Tech: Sails.js, Vue.js, Xamarin, Wearable Activity Trackers (Bluetooth Low Energy), MySQL, RESTful API, Google FCM, Amazon S3, Amazon CloudFront

HONOURS & AWARDS

→ **Digital Economy Social Impact Award: FeedFinder**
  Engineering and Physical Sciences Research Council, Dec 2015
→ **Rosalind Franklin Appathon Finalist: FeedFinder**
  University College London, Feb 2016
→ **North East Museum of the Year: Collections Dive Discovery Interface**
  The Journal Culture Awards, April 2015
→ **Best Undergraduate in School of Computer Science 2010**
  University of Lincoln, Aug 2010

PROFESSIONAL MEMBERSHIPS AND ACADEMIC SERVICE

Association for Computing Machinery

REFERENCES

Available upon request