Dr Dan Richardson

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Human-computer interaction researcher and software engineer, with extensive experience in leading projects, hosting client-facing interactions, and working in cross-disciplinary teams. I have designed, developed and published mobile and full-stack web applications across multiple technologies with several partner organisations, and am well published in technology design research using participatory methods to engage with stakeholders.

EDUCATION

MRes & PhD in Computing Science (Digital Civics)   Open Lab, Newcastle University; 2015 - 2020

Thesis title: *Local Communities as Infrastructure for Place-Based Mobile Learning*

Computer Science Games Engineering Masters   Newcastle University; 2010 - 2014 (First class honours)

EMPLOYMENT & EXPERIENCE

Research Fellow   Action Lab, Monash University, Melbourne; 2020 - Present

Led multiple research & development projects with several **partner organisations**, including VACRO (designing an application to support prison leavers), and Oxfam in Bangladesh, Caritas Nepal, and the Red Cross Red Crescent. Designed, organised, and either ran or supervised numerous **stakeholder engagements**, including **design workshops**, **focus groups** and **semi-structured interviews**, conducting **qualitative analysis** on resulting data. Project lead for *Paroli* (see *Projects*). Was one of the lead organisers & chaired the ACM COMPASS'21 conference; designed and ran an engagement programme for offshore students starting university during the pandemic; and was a Delivery Lead in an international volunteer programme for NGOs.

Doctoral Researcher   Open Lab, Newcastle upon Tyne; 2015 - 2020

Human-Computer Interaction PhD. Worked closely with local schools, businesses and volunteer groups to inform the design of *OurPlace* (see *Projects*). Designed and delivered dozens of **design workshops**, **interviews** and **technology deployments** with hundreds of stakeholders, through both **multi-year ethnographic studies** and a series of one-off engagements. The project resulted in several academic publications, as well as real-world impact through job creation and ongoing usage of the platform.

Visiting Researcher   International Federation of the Red Cross Red Crescent, Geneva; 2018

Worked at the IFRC's Geneva headquarters in the Innovation Team to develop *TalkFutures* (see *Projects*).

Visiting Researcher   International Computer Science Institute, Berkeley; 2017

Worked within a small team to develop a user onboarding experience for a MOOC platform; designed and hosted **participant workshops** and **think-aloud walkthroughs** to assess it.

Research Associate   Culture Lab, Newcastle University, Newcastle upon Tyne; 2014 - 2015

Contributed to several research projects, including: *MySkinSelfie* (see *Projects*); *Speeching*, a mobile platform designed to assist in therapy for people living with Parkinson's; and *VoiceBoard*, a device which provided a peer support platform for people experiencing homelessness.

Gameplay Programmer   Lemon Moose Games, Gateshead; 2014

Used server-side technologies Unity3D to develop a variety of video games in a small team, working towards client specifications.

HIGHLIGHTED PROJECTS

Publications, code repositories, app store links and further details available at danrichardson.me

Paroli   *A web platform which supports holding digitally-augmented calls over traditional phone networks*

- Principal researcher, designer & developer of the full platform stack.
- Leading further research and development as **project lead** of a small team of researchers and developers, overseeing the design and implementation of additional features and use of the platform in ongoing research.
- Working with over a dozen organisations in South Asia so that they can host the system on a long-term, sustainable basis.
- Designed, delivered and supervised **design workshops**, **semi-structured interviews** and **user testing** with international stakeholders.
- Produced **financial plans** and **technical support** for external organisations' deployments.
- First author on one resulting published paper, with more in review.

OurPlace   *Allows users to easily produce, share & complete creative place-based mobile learning activities*

- My PhD project. Published resulting application on the **App Store** & **Play Store**. Open source on **GitHub**.
- Developed through a **user-centred design**, **design-based research** approach: led **design workshops, interviews and deployments** with schools, businesses & volunteer organisations to engage with hundreds of **stakeholders**, including children, officials, professionals and volunteers.
- Set against the backdrop of the UK's austerity politics, each stakeholder group had different priorities and agendas which shaped the technology's design and use.
- The project resulted in several academic publications, as well as real-world impact through job creation and ongoing usage of the platform.

TalkFutures   *Supports the Red Cross in holding global consultations with its international volunteer network*

- Co-developed in a small team as a part of the IFRC's Strategy 2030. Produced a design that prompted conversations from members of 86 different National Societies, discussing the challenges the Federation should prepare for.
- Helped organise and support the publicity campaign and international deployment.

MySkinSelfie   *A smartphone app with a privacy focus, designed for easily tracking skin conditions over time*

- Developed the full stack for a cross-platform app, deployed within the UK's National Health Service.
- Designed and developed through a **user-centred design** approach, prioritising security and user privacy.
- Held **usability study** with participating NHS patients. Discussed the project on BBC Radio Newcastle.

TECHNICAL SKILLS

Languages: Javascript, HTML/CSS, C#, TypeScript, Java, Python, C++, SQL
Frameworks & Libraries: Vue.js, Quasar, React Native, React.js, .Net Framework/Core, Web API/ASP.Net, Razor, Jekyll, Xamarin Android/iOS/Forms
Tools: Git, Google Firebase (Functions, RTDB, Firestore, Authentication, Storage), Visual Studio/Code, Linux, Ansible, Microsoft Azure, Amazon EC2, Adobe Suite, LaTeX

ACADEMIA

Published on 17+ papers at recognised international venues, including 4 which I wrote and presented as first author. Secured $50,000 AUD of funding to run *Paroli* studies in Bangladesh. Up-to-date details and PDFs of papers and my PhD thesis are available at danrichardson.me.