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| Tom Lodge  Research Fellow, Full-stack developer | https://tomlodge.info  tlodge@gmail.com  **+44**7972639571 | |
| I am a Research Fellow and developer at Nottingham University. I have worked on a broad variety of projects, with a wide range of industrial partners and have built up expertise in technologies right across the stack. My doctorate investigated the utility of ad-hoc, short-range (Bluetooth) networks for large-scale data collection. I love frontend work and my most recent project has involved the design and implementation of an online IDE for constructing privacy preserving IoT apps (React Redux and Docker). You can see examples of my work at https://tomlodge.info/sc | | |

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| **Recent projects** | **IoT Databox**EPSRC Funded | 2016-present |
|  | This project is developing a clean-slate privacy-focused infrastructure to provide users with full control of their personal data. It is principally focused on IoT data; the number of devices that capture and record information about us is expected to rise to unprecedented levels, creating challenges around privacy and data liability. The project is a collaboration with ***Cambridge University*, *Imperial College* and various industrial partners.** I have developed an online IDE for constructing privacy preserving apps.  **Buttonkit** Early Stage Startup 2016-present  I am a developer for an early stage startup and have built a platform that supports residents living in high rises. The platform has an Android and iOS app (React Native) and a Nodejs backend. It also has a web-based graphical authoring system (React/Redux) for building functionality that can be immediately deployed to our Buttonkit app. The infrastructure is fully Dockerised and runs on of Kubernetes. I am responsible for all design, coding and infrastructure development. | |
|  | **User Centric Networking**European Union Funded | 2014-2016 |
|  | This project was a multi-institution collaboration (***Technicolor, Eurecom, Fraunhofer, Intamac, University of Cambridge, University of Nottingham, Martel Consulting, Inria, Portugal Telecom***) that is developing content and recommendation systems based upon user networking behaviour. In collaboration with ethnographers, I have built data visualisation tools (d3.js) that support detailed analysis and tagging of network data being collected in households across France and the UK. | |
|  | **Communities in the Clouds**Research Councils UK Funded | 2014 |
|  | I ran a pilot project in collaboration with ***Microsoft Research*** that investigated the role that technology might play in supporting residents living in high-rise and high-density communities. The project was composed of several strands: data analysis and visualisation (of forum data), ethnography and a workshop with industry professionals. One exciting outcome from the project has been the chance to run technology trials in a large flagship East London housing estate. | |
|  | **Becoming Dataware**Horizon Digital Economy Funded | 2012-2014 |
|  | This project investigated how users might take greater control and ownership of their 'digital footprint' by considering a locally controlled hosted and managed personal data store that permits constrained queries by third parties (energy companies/supermarkets etc). I developed and extended code (python) to create a proof-of-concept home router that collected energy and network data which could be interrogated by (OAuth) permitted third parties. The software ran on a small form factor, Linux arm computer (dreamplug). | |
|  | **Homework** EPSRC Funded | 2009-2012 |
|  | A four-year, five-institution (***Nottingham, Imperial, Glasgow, Nottingham, Microsoft and BT***) collaboration looking at the design and provision of tools to improve support for home networking. I was part of a team that built a Linux router (running [Nox](http://www.noxrepo.org/)/[Open vSwitch](http://openvswitch.org/)) and developed two iphone/ipad apps that supported novel visualisation and control of a local home network. | |
| **Employment** | **University of Nottingham** Horizon Digital Economy  Research Fellow | 2013-current |
|  | **Queen Mary, University of London** Open & Distance Learning  Research Fellow | 2002-2005 |
|  | **University College London** Networks and Multimedia Research  Research Fellow | 2000-2002 |
| **Education** | **University of Nottingham** Phd  Opportunistic Data Collection in People Centric Sensor Networks | 2007-2012 |
|  | **University College London** MSc  Data Communications Networks and Distributed Systems  Award: Distinction | 1999-2000 |
|  | **Queen Mary, University of London** BSc  Computer Science  Award: First Class, Drapers Award for *‘outstanding academic achievement’* | 1996-1999 |

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| **Key Tech Skills** | **Frontend**  react/redux  react native  d3  ios (Objective-C)  android (Java)  css, sass, less  webpack | **Backend**  node.js  python (flask)  jekyll  python  mysql  postgresql  mongoDB  neo4j | **Devops**  amazon EC2  heroku  docker  kubernetes (a little)  nginx |
|  | **see:** <http://github.com/tlodge> | | |
| **Publications** | Urquhart, L., Lodge, T. and Crabtree, A. (2018) **Demonstrably doing accountability in the Internet of Things**, International Journal of Law and Technology.  Lodge, T., Crabtree, A. and Brown, A. (2018) **IoT app development: supporting data protection by design and default**, Proceedings of the 2018 Joint Conference and International Symposium on Pervasive and Ubiquitous Computing and Wearable Computers, pp. 901-910, Singapore, ACM Press.  Lodge, T., Crabtree A. and Brown, A. (2018) **Developing GDPR compliant apps for the edge**, Proceedings of the 13th International Workshop on Data Privacy Management, pp. 313-328, Barcelona, Springer.  Crabtree, A., Lodge, T., Colley, J., Greenhalgh, C., Glover, K., Haddadi, H., Amar. Y., Mortier, R., Li, Q., Moore, J., Wang, L., Yadav, P., Zhao, J., Brown, A., Urquhart, L. and McAuley, D. (2018) **Building accountability into the internet of things: the IoT Databox** **model**, Journal of Reliable Intelligent Environments, vol. 4 (1), pp. 39-55.  Goulden, M., Tolmie, P., Mortier, R., Lodge, T., Pietilainen, A.K. and Teixeira, R., 2018. **Living with interpersonal data: observability and accountability in the age of pervasive ICT.***New Media & Society*, *20*(4), pp.1580-1599.  Crabtree, A., Lodge, T., Colley, J., Greenghalgh, C. and Mortier, R. (2017) **Accountable IoT? Outline of the Databox model**, International Symposium on a World of Wireless, Mobile, and Multimedia Networks, pp. 1-6, Macau, IEEE.  Mortier, R., Zhao, J, Crowcroft, J., Li, Q., Wang, L., Haddadi, H., Amar, Y., Crabtree, A., Colley, J., Lodge, T., Brown, A., McAuley, D. and Greenhalgh, C. (2016) **Personal data management with the Databox: what’s inside the box?**, Proceedings of the ACM Workshop on Cloud-Assisted Networking, pp. 49-54, Irvine, ACM.  Crabtree, A., Lodge, T., Colley, J., Greenhalgh, C. and Mortier, R. (2016**) Building accountability into the Internet of Things**, Social Science Research Network, DOI 10.13140/RG.2.2.27512.44803  Crabtree, A., Lodge, T., Colley, J., Greenhalgh, C., Mortier, R. and Haddadi, H. (2016) **Enabling the new economic actor: data protection, the digital economy, and the Databox**, Personal and Ubiquitous Computing, vol. 20 (6), pp. 947-957.  Crabtree, A., Rodden, T., Tolmie, P., Mortier, R., Lodge, T., Brundell, P. and Pantidi, N., 2015. **House rules: the collaborative nature of policy in domestic networks.***Personal and Ubiquitous Computing, 19(1),* pp.203-215. | | |
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|  | Skatova, A., Johal, J., Houghton, R., Mortier, R., Bhandari, N., Lodge, T., Wagner, C., Goulding, J., Crowcroft, J. and Madhavapeddy, A., 2013. **Perceived risks of personal data sharing.** *Proc. Digital Economy: Open Digital* (Nov. 2013). | | |
|  | Lodge, T., 2012. **Opportunistic data collection in people-centric sensor networks.**(Doctoral dissertation, University of Nottingham). | | |
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|  | Radenkovic, M. and Lodge, T., 2006. **Engaging the public through mass-scale multimedia networks.***IEEE MultiMedia*, (3), pp.12-15. | | |