

Matthew Fullerton

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I've been involved in R&D and software development for over 10 years: starting with video enhancement for people with visual impairment, leading later to work on driving simulation for use in studying night-driving difficulties. After several years of research in the field of driving and transportation, I now work as a consultant, focusing on software solutions for mobility and environment data-driven projects. Although I have worked with several languages in frontend and backend, I'm most comfortable doing API and backend work in `node.js` and `Python`.

Further information about me and my work including a list of publications from my time in research can be found on [LinkedIn](#). Code contributions can be found on [GitHub](#).

Professional Experience

- | | |
|---|---|
| 10/2016-3/2017
& 11/2017-present | as Climate-KIC stipend holder
as an employee for Hawa Dawa UG, Munich
<i>Software Engineer</i> <ul style="list-style-type: none">• Building infrastructure for the collection and model-based visualization of air quality data from a sensor network |
| 4/2016-12/2016 | Impact Hub/Eight Billion Lives fellow for Hawa Dawa, Munich
<i>Software consultant and co-founder of the resulting company</i> |
| 1/2015-12/2015 | EXIST stipend holder for Smartlane, Munich
<i>Technical Director and co-founder of the resulting company</i> <ul style="list-style-type: none">• Development of a flexible platform for data processing and visualization for the mobility industry |

4/2013-present

Freelance Software/Web Developer

On the following projects (current roles/projects marked in bold):

- **Derilinx Ltd., Dublin**
 - Resource Data (Data import and customized CKAN for presentation - a project for the NRG1)
 - Smaller projects including Datadore and data.gov.ie using CKAN, GeoServer and Docker
 - Mentoring a junior developer
- Smartlane UG, Munich
 - Resource Projects (Data import - a project for the NRG1, 2016)
 - SmartlaneDISPATCH! mobile app (2016)
 - Mobility data visualization examples (2015)
- Open Knowledge Foundation Germany:
 - 2030 Watch - a data visualization platform for monitoring progress towards the 2030 Sustainable Development Goals (2016)
 - **Technical support and development work for offenesdatenportal.de (Niederrhein region)** and daten.aachen.de (Aachen) (CKAN-based)
 - Open Data Monitor (open-data-map.de, offenedaten.de) - harmonization and analysis of multiple German data catalogs (CKAN and non-CKAN), web crawling and scraping for civic data sources - 2014
 - Government spending visualizations (Berlin, Rheinland-Pfalz) - 2014-15
- Open Data Census 2013 - improvements to backend and frontend mostly to improve the submission and review process (Open Knowledge, 2013-14)
- Motion tracking data capture (University of Munich, Psychology Faculty, 2013-14)

3/2009-6/2014

Chair of Traffic Engineering and Control, Technische Universität München

Research Assistant

- Responsible for partner contribution to an EU FP7 project (SOCIONICAL - exploring the interfaces between human behavior and technology that influences that behavior in the realm of traffic and crowd management)
- Teaching and student thesis supervision

Higher Education

10/2007-7/2009

MSc in Electronics by Research, University of York, UK

Thesis: Development of a System to study Glare Sensitivity in a Driving Simulator

- The research was conducted at Eli Peli's Lab at the Schepens Eye Research Institute, Boston (Harvard Medical School affiliate) during a paid research stay (8/2007-11/2008)

10/2002-7/2007

MEng in Electronics with Media Technology and a Year in Industry, University of York, UK

Thesis: StroMoHab - Environment and Task Creation

- My year in industry was spent carrying out research at Eli Peli's Lab at the Schepens Eye Research Institute, Boston (Harvard Medical School affiliate)

Skills and other activities

Languages

English: native
German: fluent
French: can get by

Activism and community contributions

- Development of websites for non-profit organisations (e.g. International Campaign for Justice in Bhopal, You Are Here News Magazine (below))
- Co-founder of local volunteer video news magazine show in Cambridge, MA, USA
- Active Member of Speak, People and Planet, University Radio York and York Student Television during my time in York
- I acted as a maintainer for dataportals.org and the Recline.js data visualization library. I set up and maintain a document OCR service at givemetext.okfnlabs.org.

IT

- Languages: Python, JavaScript/node.js, Java, C/C++
- Web: HTML(5), CSS(3), Flask, Express, jQuery, React.js, AngularJS, Bootstrap, ElementalUI
- Mobile: Cordova, Android SDK
- DevOps/Sysadmin: Docker, Npm/Grunt, AWS, Bash, Supervisor, Cron
- Data: PostgreSQL, MongoDB, Accumulo/Hadoop, Kafka
- Office, graphics and video: OpenOffice, MS Office, Markdown, LaTeX, GIMP, Final Cut Pro