Adam Kewley

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Tel: +44 784 958 9843 **Location**: U.K. **Nationality**: British

Relevant Work Experience

2020–present **Open Source Developer**, TU Delft
Currently beginning to work on open-source biomechanical simulations software (C, C++, Python). Initially, with an intention to improve the performance and usability of existing open-source projects.

2018–2020 **Software Developer**, PetaGene Ltd.
Software development at a biotech startup. I was responsible for all aspects of software production. Example projects: software implementation of a proprietary hardware compressor (>1 PB of data compressed), a webassembly port of PetaGene's existing codebase (demonstrated at ASHG 2019), and a full-stack encryption platform (Petasuite Protect™).
Tech: C, C++, CMake, emscripten, React, Typescript, Python, Docker, GitLab, Jenkins

2016–2018 **Software Developer**, Institute of Astronomy, University of Cambridge
Software development for the Gaia Satellite project. I was responsible for designing and implementing research-focused systems that could scale to >1 PB data volumes. Example project: a full-stack webapp for extracting research datasets (open source, see *Jobson*).
Tech: Java, Clojure, Scala, Spark, MapReduce, Typescript, React, Python, Luigi

2015–2016 **Automation, Standardization, and Data Scientist**, Unilever PLC
Software development, data science, and research for Unilever's Automation and Standardization team. I was responsible for extracting research data from a variety of analytical instruments, aggregating that data into dashboards/reports, and working with the researchers to develop new automation techniques.
Tech: C#, F#, R, SQL, WPF, Tableau, Pipeline Pilot.

2014–2015 **Full-Stack Web Developer**, Crown Informatics Ltd.
Software development for a small company that produces clinical audit platforms. I was responsible for developing landing pages, login portals, and contact list systems that were compatible with legacy browsers. Remote working position.
Tech: Javascript, Ruby, IBM Notes, IBM Domino, angularjs

2011–2015 **Ph.D. in Chemistry**, Department of Chemistry, University of Liverpool
Academic research into porous organic cage compounds. I performed automated synthetic experiments with robotic platforms and designed sensitive analytical experiments.

Education

2011–2015 **PhD in Chemistry**. University of Liverpool
Thesis: *Synthesis and Separation Properties of Organic Cage Compounds*
Supervisor: Prof. Andrew Cooper FRS

2011 **MSc in Nanoscience**. University of Nottingham
Grade: Merit

2007–2010 **BSc in Chemistry**. University of Nottingham
Grade: First

Programming Language Experience

>2048 h	C, C++, Python, Javascript
>1024 h	Java, C#, Ruby, Typescript
>256 h	Rust, F#, SQL, Scala
>128 h	Clojure, Bash, Haskell

Selected Open Source Projects

All projects available on my GitHub page (github.com/adamkewley).

- **Jobson**: A web application that transforms any command-line application into a job service.
- **libdeflater**: Rust bindings to libdeflate.
- **klamath**: Tools for working with Fallout 1/2 assets.

Selected Publications

2018	Gaia Data Release 2: Processing of the photometric data *Astronomy and Astrophysics* (doi.org/10.1051/0004-6361/201832712)
2015	Porous Organic Cages for Gas Chromatography Separations *Chemistry of Materials* (doi.org/10.1021/acs.chemmater.5b01112)
2014	Separation of Rare Gases and Chiral Molecules by Selective Binding in Porous Organic Cages *Nature Materials* (doi.org/10.1038/nmat4035)
2012	Supramolecular isomers of metal–organic frameworks: the role of a new mixed donor imidazolate-carboxylate tetradentate ligand *Dalton Transactions* (doi.org/10.1039/C2DT12055K)

Other

2018–2019	**Tech Demos**. Given at BioIT (Boston, 2019), ASHG (Houston, 2019). Required preparing customer-ready tech demos and engaging with customers in the booth.
2012–2018	**Public Engagement**. Royal Society Summer of Science Exhibition (*Gaia*, 2018; Cooper Group, 2017). Birmingham Big Bang Fair (*Gaia*, 2017). RSC "Spectroscopy in a Suitcase" (5 schools, 2014-2015). Events involved engaging directly with the public, at exhibition stands or in classrooms, to discuss the value of scientific research.
2014–2018	**3D Design**. Designed and published journal front covers for *Agnewandte Chemie* (2018), *Nature Chemistry* (2018, 2017), *Advanced Materials* (2016), *Nature Materials* (2014, 2018). Designed convention backdrop for RS Summer of Science exhibition (2017).
2007–2010	**Undergraduate Awards and Grants**: Nuffield Bursary (Mouchel Parkman PLC, 2006), Robert Ficken award for Academic Excellence (University of Nottingham, 2007), Nuffield Bursary (Prof. Stephen Liddle, 2008), Stanley Kipping awards for academic excellence (University of Nottingham, 2008 and 2009), BBSRC sponsorship (MSc in Nanoscience, University of Nottingham, 2011).