

E-mail: adamk117@gmail.com **Site:** adamkewley.com **GitHub:** github.com/adamkewley

RELEVANT WORK EXPERIENCE

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|------------------|---|
| 2020–
present | <p>Open Source Developer, Technische Universiteit Delft (BioMechanical Engineering)</p> <p>I am responsible for all aspects of delivering the opensimcreator.com project, including development, QA, deployment, user support, marketing, and identifying future features. My other work involves improving the performance of OpenSim, which requires a comprehensive understanding of C++. Additionally, I help with provisioning Linux servers, mentoring, and software engineering meetups.</p> <p>Tech: C++, OpenGL, game engine development, Python, Matlab</p> |
| 2018–
2020 | <p>Software Developer, PetaGene Ltd.</p> <p>Software development at a biotech startup. I was responsible for identifying, implementing, testing, and shipping customer-facing projects. Examples: software implementation of a proprietary hardware compressor (>1 PB of data compressed), a webassembly port of PetaGene's existing codebase, and a full-stack encryption platform (Petasuite Protect).</p> <p>Tech: C, C++, CMake, emscripten, React, Typescript, Python, Docker, GitLab, Jenkins</p> |
| 2016–
2018 | <p>Software Developer, Institute of Astronomy, University of Cambridge</p> <p>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: Jobson, a full-stack webapp for extracting research datasets (see GitHub).</p> <p>Tech: Java, Clojure, Scala, Spark, MapReduce, Typescript, React, Python, Luigi</p> |
| 2015–
2016 | <p>Automation, Standardization, and Data Scientist, Unilever PLC</p> <p>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.</p> <p>Tech: C#, F#, R, SQL, WPF, Tableau, Pipeline Pilot</p> |
| 2014–
2015 | <p>Full-Stack Web Developer, Crown Informatics Ltd.</p> <p>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.</p> <p>Tech: Javascript, Ruby, IBM Notes, IBM Domino, angularjs</p> |

EDUCATION

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|---------------|---|
| 2011–
2015 | <p>PhD in Chemistry. University of Liverpool</p> <p><i>Thesis title: Synthesis and Separation Properties of Organic Cage Compounds</i></p> <p><i>Supervisor:</i> Prof. Andrew Cooper FRS</p> |
| 2011 | <p>MSc in Nanoscience (Merit). University of Nottingham</p> |
| 2007–
2010 | <p>BSc in Chemistry (Distinction). University of Nottingham</p> |

SELECTED OPEN-SOURCE PROJECTS

All of these projects are available on my GitHub page (github.com/adamkewley):

- **OpenSim Creator:** 3D desktop UI tooling built using C++, OpenGL, and ImGui, integrated into purpose-built engine. An example of my approach to a larger project (> 100k downloads) with a longer development timeline (> 5 years) and non-developer end-users.
- **Jobson:** A platform that generates web UIs that can remotely run scripts. An example of my approach to a medium-sized, multi-language, multi-layered (CLI, API, UI, etc.), project targeted at non-developer end-users.
- **libdeflater:** Rust bindings to libdeflate. An example of my approach to a smaller standalone library project that requires wide (> 100k downloads) distribution.

SELECTED PUBLICATIONS

2018	Gaia Data Release 2: Processing of the photometric data <i>Astronomy and Astrophysics</i> (doi.org/10.1051/0004-6361/201832712)
2015	Porous Organic Cages for Gas Chromatography Separations <i>Chemistry of Materials</i> (doi.org/10.1021/acs.chemmater.5b01112)
2014	Separation of Rare Gases and Chiral Molecules by Selective Binding in Porous Organic Cages <i>Nature Materials</i> (doi.org/10.1038/nmat4035)
2012	Supramolecular isomers of metal–organic frameworks: the role of a new mixed donor imidazolate-carboxylate tetradentate ligand <i>Dalton Transactions</i> (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 (<i>Gaia</i> , 2018; Cooper Group, 2017). Birmingham Big Bang Fair (<i>Gaia</i> , 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 <i>Angewandte Chemie</i> (2018), <i>Nature Chemistry</i> (2018, 2017), <i>Advanced Materials</i> (2016), <i>Nature Materials</i> (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).