

E-mail: adamk117@gmail.com **Site:** adamkewley.com **GitHub:** github.com/adamkewley
Tel: +44 784 958 9843 **Location:** Cambridge **Nationality:** British

RELEVANT WORK EXPERIENCE

- 2016–
present **Software Developer**
Institute of Astronomy, University of Cambridge
Software development for the Gaia Satellite project. Focused on designing, implementing, and deploying complete systems that process large (>1 PB) datasets. **Languages:** Java, Scala, Ruby, Python, Javascript. **Technologies:** Linux, Hadoop MapReduce, Spark, Luigi, Dropwizard, React.
- 2015–
2016 **Automation, Standardization, and Data Scientist**
Unilever PLC
Software development, data science, and research for Unilever’s Automation and Standardization team. Focused on producing new systems that accelerate existing research areas. **Languages:** C#, WPF, SQL (Oracle). **Technologies:** Windows (development), Tableau, Pipeline Pilot.
- 2014–
2015 **Full-Stack Web Developer**
Crown Informatics Ltd.
Software development for a small (5 employees) company that produces clinical audit platforms. Developed landing pages, login portals, and contact systems. Focus was on modernizing user experience of existing products without breaking client compatibility (e.g. IE7). Remote working position. **Languages:** Javascript, Ruby. **Technologies:** IBM Notes, IBM Domino, Angularjs
- 2011–
2015 **Ph.D. in Chemistry**
Department of Chemistry, University of Liverpool
Academic research into porous organic cage compounds. Performed automated synthetic experiments with robotic platforms and designed sensitive analytical experiments. **Supervisor:** Prof. Andrew Cooper FRS. **Outputs:** Two publications (see below) and a patent in a novel separation technology (WO2015198070).

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
Thesis: *Amorphous infinite coordination polymers and their synthesis from a novel set of organic ligands.*
Supervisor: Prof. Neil Champness
Grade: Merit
- 2007–
2010 **BSc in Chemistry.** University of Nottingham
Grade: First
- 2007 **A-Levels.** Wirral Grammar School
Grades: Chemistry (A), Physics (A), Computing (A)

PROGRAMMING EXPERIENCE

I am a self-taught software developer. The main literature I studied early-career was software engineering focused (e.g. *Pragmatic Programmer*, *Code Complete*, *The Art of Unix Programming*). I am gradually shifting towards theoretical literature (e.g. *Compilers*, *Introduction to Algorithms*).

>1024 h	Java, C#, Javascript, Ruby, Python
>256 h	C, F#, SQL, Scala
>128 h	C++, Rust, Clojure, Typescript, Bash, Haskell
>32 h	PHP, x86 ASM, VBA, Lua, WebGL, OpenGL

Note: language experience does not necessarily correspond to future interest.

RELEVANT 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 metalorganic frameworks: the role of a new mixed donor imidazolate-carboxylate tetradentate ligand <i>Dalton Transactions</i> (doi.org/10.1039/C2DT12055K)

OTHER

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> (2017), <i>Advanced Materials</i> (2016), <i>Nature Materials</i> (2014). Designed convention backdrop for RS Summer of Science exhibition (2017).
2016– 2018	Open-Source. Some of my side-projects and studies are published open-source. My site contains live demos of some of my work. Example projects: <ul style="list-style-type: none">• Rust: Studied Rust introduction and produced small application in the language (fo2dat, GitHub).• Multiprocessing: Developed webapp that connects server-side processes with web browsers (textadventurer, Github)• Web UX: Developed interactive webapp that enables researchers to edit lab plates as tables (plateyplatey, Github)
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).