PHILIP ADLER, PH. D.

IN A NUTSHELL

Skilled, Driven Cheminformatician, Software Engineer, and Crystallographer

PERSONAL INFORMATION

email	jobs4phil@dler.me.uk
website	http://www.dler.me.uk
phone	(M) +447905887080

RELEVANT WORK EXPERIENCE

2017-Now   VISA

Hadoop Developer

I am presently employed at VISA as a Hadoop software developer. The project to which I am presently assigned involves using Scala/Spark/Hadoop to assess the risk of worldwide transaction devices, for example ATMs. I continue to employ my skills as a Big Data scientist in my work, on my largest data sets to date.

2017   MWR Infosecurity

Python Developer

I was employed by an information security company as a Python developer. My responsibilities included the development of software to assist in detecting and neutralising extant and potential security threats, utilising C#, Python, Postgresql and Elastic Search, and employing machine learning techniques. By the nature of the work, the information which can be shared on the exact techniques involved are sensitive information. I have also applied big data techniques and Bayesian statistics to diagnosing complex problematic software interactions across a large system estate of tens of thousands of endpoints.

2015-2016   Haverford College

Post-Doctoral Researcher in Chemistry, then Visiting Assistant Professor of Computer Science

In this position at Haverford College, I was engaged with several research projects in computer science and chemistry. I have acted in an advisory role for eight undergraduate project students, as well as carrying out my primary research funded by the NSF as part of the Dark Reactions project. My role in this research revolved around software and database engineering and design (including but not limited to the python/django full stack), as well as applying Big Data techniques to chemical reactions. Since our publication in Nature, I began coordinating with research groups at external institutions globally to incorporate their data into our studies. I also undertook some research of my own design centered around applications of statistics to inorganic hydrothermal syntheses. In addition, I developed and delivered a Computer Science course entitled "Relational Database Design and Utilisation", and delivered a course on "Topics in Materials Science", while co-authoring a paper on algorithmic fairness.
Reference: Sorelle Friedler · sorelle@cs.haverford.edu

2013   25th Southampton Sea Scouts

Assistant Scout Leader

During the final year of my Ph. D. I volunteered as a scout leader at a local scout troop, a position which required organisation, and helping to create and manage entertaining educational activities with young people.

2012   Union Films

Publicity Manager

During my time at Southampton University I volunteered at the independent cinema associated with the Students Union, in a customer facing role. Latterly, I was appointed by the member/volunteers to the position of Publicity Manager, where it was my duty to ensure that publicity materials were both generated and distributed effectively to maximise audience attendence.

	2007–2012 University of Southampton
Laboratory Assistant	During my time at the University of Southampton, I approached a range of assistant roles in a variety of laboratory environments, including a physical organic chemistry lab with Prof. Martin Grossel, an X-ray crystallography lab with Simon J. Coles, and an Organic Synthesis Summer School. Reference: Simon Coles · S.J.Coles@soton.ac.uk
University of Southampton	During my second year of University, I joined the team which conducts the yearly funding drive at Southampton University as a data entry assistant, taking hand-taken records of donor records and amounts and ensuring their correct entry into the Microsoft Access database which was being used at the time.
	2007 Oxoid
Laboratory Assistant	Between my A-levels and starting my degree, I assisted short-term with an ongoing research project assisting in the creation of agar plates utilising novel protein sources.
	2005-2006 Tadley Medical Partnership
Data Entry Assistant	During summer holidays of my GCSE years at Secondary School, I assisted with the transition of a local General Practice Surgery from hand-written records and files to the new EMIS Health's flagship patient record database systems

EDUCATION

	2011-2014 The University of Southampton
Ph. D.	Thesis: *Crystalline Cheminformatics: Big Data Approaches to Crystal Engineering* Having completed my Undergraduate Degree at the University of Southampton, I progressed to a position as a fully-funded and stipended Ph. D. Student. Funded by the Cambridge Crystallographic Data Centre and the National Crystallography Service, my research focused on using statistical methods to analyse large corpuses of crystallographic data. This involved a great deal of analytical problem solving and programming in a variety of programming languages, analysing software requirements, and assessment of third party software. There were also a variety of teaching opportunities including both practical laboratory demonstration and assisting teaching the Synthetic Biology module of the undergraduate chemistry course. reference: Simon Coles · S.J.Coles@soton.ac.uk Supervisors: Dr. Simon Coles *(Chemistry)*, Prof. David Woods *(Maths)* & Dr. Terence Threlfall *(Chemistry)*
	2007-2011 The University of Southampton
Master of Chemistry	· *Second Class Honours* My first degree was in 'pure' chemistry, although I made the most of the opportunity to study a diverse range of subjects as a part of my degree, including geology and biology. In addition, I took the advice of one of my lecturers, Jeremy Frey, and taught myself software engineering. I later worked with him in assessing, reviewing, and assisting in the documentation of the Electronic Lab Notebook software under development by his research group.
	2001-2007 Theale Green Community School
A-Levels	Chemistry: A, Physics: B, History: B, Music: D
GCSE	• A/A*-grade: 8, *Including Maths, English and Science* • B-grade: 2 • Other Grades: 1

PUBLICATIONS

	May. 2016 Machine-learning-assisted materials discovery using failed experiments
Nature	Paul Raccuglia, Katherine C. Elbert, Philip D. F. Adler, Casey Falk, Malia B. Wenny, Aurelio Mollo, Matthias Zeller, Sorelle A. Friedler, Joshua Schrier & Alexander J. Norquist
	Dec. 2015 Probing structural adaptability in templated vanadium selenites
Polyhedron	Philip D.F. Adler, Rosalind Xu, Jacob H. Olshansky, Matthew D. Smith, Katherine C. Elbert, Yunwen Yang, Gregory M. Ferrence, Matthias Zeller, Joshua Schrier, Alexander J. Norquist,
	Dec, 2016 Auditing Black-box Models for Indirect Influence
IEEE ICDM, Barcelona	Philip Adler, Casey Falk, Sorelle A. Friedler, Gabriel Rybeck, Carlos Scheidegger, Brandon Smith, Suresh Venkatasubramanian

SOFTWARE ENGINEERING SKILLS

Basic	Java, Fortran, VBA, C, C#, Elastic Search, puppet
Intermediate	C, *nix, Windows, Elastic Search, Javascript, Vagrant
Advanced	Python, System Administration, HTML, Php, MySQL, Postgresql Git, Javascript, LaTeX, R

OTHER INFORMATION

Awards	2012 · World Universities Network funding for an international software collaboration with the University of Western Australia
Drivers License	Clean, Full United Kingdom Driver's License.
Presentations	2016 · Three presentations and three posters at the two ACS National Meetings, A poster at the Start Talking Science Conference, Philadelphia, and a Presentation at the Falling Walls Lab, NYC
	2015 · Presentation on Thesis work at The British Crystallographic Association Spring Meeting
	2012-2014 · Oral Presentations at the Cambridge Crystallographic Data Centre to Students and Supervisors
Additional Teaching Skills	2011-2014 · I underwent demonstration training and attended several courses and seminars in education, as well as hands-on experience demonstrating in laboratories and giving short lectures on inorganic chemistry and synthetic biology. I also mentored project students in the third year of their undergraduate degrees.
Interests	Piano and Guitar · Martial Arts · Photography

December 18, 2017