

Stephen Knox PhD BA (Mod)

CONTACT INFORMATION	60 Broughton Court, Broughton Road, London W13 8QN England	<i>T (Mob):</i> (+44) 77 8699 8383 <i>T (Home):</i> (+44) 208 621 8844 <i>E:</i> knoxsp@gmail.com
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PERSONAL STATEMENT	With a PhD in computer science and over five years experience in industrial grade software development, I am now looking for a new challenge. Over the last five years, I have developed full-stack web solutions for gaming websites and an open-source data management system for environmental modelling. I am now looking to build on this experience in a new, client-facing role focussed on delivering high quality software. Strongly team-focussed, I am eager to work on exciting new projects, and working with cutting-edge technologies and development methodologies.
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PERSONAL SKILLS	Highly focussed and an excellent communicator, giving me the ability to work autonomously and in a team environment.
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Extensive experience in research and development.

Highly effective and experienced communicator at all levels and to varied audiences.

Experienced in several programming languages and techniques. Can easily adapt to new challenges.

TECHNIAL SKILLS	I have a strong background in computer science and therefore can quickly adapt to most new technologies and languages. I am passionate about well-documented, tested and robust code and the development of open-source software.
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- **Python** (incl. PyUnit, sqlalchemy, turbogears, numpy, pandas, scipy) >8 years
- **Databases** (incl. Sqlite, MySQL, Oracle) >5 years
- Web Client Technologies: (Javascript) (incl. jquery, visjs, d3, datatables, bootstrap), **CSS3**, **HTML5** >5 years
- **Web Apis:** SOAP, REST, JSON Rpcs, >5 years
- Version Control: **GIT**, **SVN** >8 years
- **Java** (incl. JUnit, Jena, Eclipse): 3 years. Proficient
- **C#**: Proficient
- Publishing: Microsoft Office, Open Office, Latex, Lucidchart
- Using **Agile** methodologies with **Jira** and **trac**
- OS: **Ubuntu** daily for >8 years. **Vim** for text editing,

EDUCATION

2005 to 2010: PhD in Computer Science, UCD Dublin.

PhD entitled “Combining Case-Based Reasoning and the Semantic Web in Recognising Situations”. Viva passed 1st April, 2010. Built an Java-based artificial intelligence system to identify the actions of people in a sensor-rich environment. Worked extensively with real-time sensor technologies, Java, Protege Ontology editor and Weka.

2001 to 2005: 2.1, BA (Mod) (Hons), Computer Science, Trinity College, Dublin, Ireland.

1996 to 2001: 475 points from 600, Leaving Certificate, St Kieran’s College, Kilkenny, Ireland. Leaving certificate results: Maths: B1, Economics B1, English B3, Irish C1, Spanish B3, Chemistry B2, Music B3.

WORK EXPERIENCE

July 2013 to Present: Senior scientific software engineer & team lead, University of Manchester. Developing an open source tool, Hydra Platform, for managing network-based data in water resource planning. Led the design and implementation a web API, requiring expert knowledge of Python, databases (MySQL, Sqlite, PostgreSQL) and web interfaces (REST, SOAP, JSON, HTML, CSS & Javascript). Developed several client applications which connect to Hydra Platform using Python, Java, C# & Javascript.

In collaboration with project partner Thames Water Utility Limited (TWUL), leading the development of a web-based 3D trade-off visualisation tool. Implemented using visjs, turbogears, sqlalchemy html 5, css3.

April 2010 to June 2013: Software developer, Geneity Ltd. Developed production quality software for large clients, most notably Coral, Ladbrokes and The Health Lottery. These websites can take up to 200 bets a second, meaning a high standard of coding, testing and support was required. Supported these products in production environment. Also heavily involved in developing the back-end administration for these websites. Worked extensively with web technologies such as HTML5, CSS3, Javascript including jQuery, Oracle and Python.

Responsibilities included prototyping, developing and deploying products to test and live environment. Dealt extensively with clients both during development and testing process.

January 2006 to April 2010: Lectured in the principles of programming languages, specifically on compiler design and virtual machines.

Teaching assistant in UCD Computer Science dept. Attended labs and marked assignments and performed various administrative tasks. Senior member of the Computer Programming Support Centre. Roles include tutoring students on Java, C++, Scheme and related logic problems.

Consultancy 2008 – 2009: Recipient of an Enterprise Ireland Innovation Voucher ¹, which allows small companies to avail of Irish research facilities. Performed a feasibility study of the application of ontologies in their software model.

¹<http://www.innovationvouchers.ie/>

Java consultancy for UCD Sport Science department. Worked on improving an existing posture monitoring system. Integrated robust bluetooth connectivity protocols, improved data processing algorithms and improved the viewer panel.

OTHER
INTERESTS

I am a very active sports person with an interest in motorsport and snowboarding and keeping fit by running regularly. I also organise a weekly 5-a-side football game. I practiced Karate for over ten years, Representing Ireland in international competitions, as well as representing DIT and TCD in intervarsity competitions. Received the grade of Nidan(second degree black belt) in November 2009.

REFEREES

Available on request