

# Dr. J Reynolds

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Software engineer and manager with a strong academic background and fifteen years' experience building high-performance software for Linux, UNIX and Windows, employing a variety of languages and software engineering methodologies.

## Experience

### **Director of Software Development**      *Cristie Software Ltd. Gloucestershire, UK*      **2014-present**

- Directed fifteen people across development, QA and operations work
- Drove the successful implementation of a full CI/CD cross-platform build, test and deploy system using containerization and infrastructure-as-code

Responsibilities:

- Head architect for top-level architecture planning or tie-breaking
- Implementation work and mentor on micro-services architecture

Languages and technologies:

- Python, Javascript (AngularJS), C++ 14, Ruby, C, PowerPC Assembly
- Docker, Jenkins, AWS, Apache, nginx, Puppet, CMake, Linux (RHEL), AIX, Solaris

### **Software Development Manager**      *Cristie Software Ltd. Gloucestershire, UK*      **2011-2014**

- Managed a ten-person, multi-disciplinary cross-platform development team.
- Delivered and maintained two new data recovery and system migration products
- Successfully introduced agile development support systems and methodology

Responsibilities:

- Product and development direction, calculation of time-scales and priorities
- Implementation and design authority for web services, licensing and internal APIs

Languages and technologies:

- Python, C++ 11 (boost), C, Java, PHP
- Jenkins, AWS, Apache, SOAP, Linux (RHEL), AIX, Solaris

### **Software Developer**      *Cristie Software Ltd. Gloucestershire, UK*      **2009-2011**

*Cristie Software Ltd. Gloucestershire, UK*

- Delivered products for Solaris and AIX and cross-platform modules for all platforms.
- Constructed a build and test environment for all supported platforms
- Designed and built distributed data management systems using Python and C++ (boost).

Responsibilities:

- Design, implementation and support of the AIX and Solaris products, build and test systems
- Prototyping new product ideas and assessing performance and practicalities

Languages and technologies:

- C++ 03 (boost), Python, C, Java
- Jenkins, Twisted, Linux (RHEL), AIX, Solaris

### **Application Lifecycle Consultant**      *Sikkra, Queensland, Australia*      **2008-2009**

*Sikkra, Queensland, Australia*

- Technical pre-sales and development for an application-lifecycle management platform.
- Created Java burn-down applets for SCRUM processes.
- Fundamental work resulting in the sale of 30 units and follow up consultancy work

Responsibilities:

- Pre-sales presentations of ALM systems and technical processes to a non-technical audience
- Consultancy-driven coding work, security analyses, SELinux policy hardening

Languages and technologies:

- C++, Java, Python, Linux (RHEL), SELinux

# Education

## PhD, Computer Science, University of Cambridge

2004-2007

*Computer Laboratory; Caius College*

### “Automatically translating type and function definitions from HOL4 to ACL2”

- The construction of a functional model of the ARM floating-point co-processor and its subsequent automatic translation into first-order logic.

Trinity College Studentship, Domestic Research Scholarship, Professor Mike Gordon

- Presented at the 18<sup>th</sup> and 20<sup>th</sup> Theorem Proving in Higher Order Logics International Conferences and at the Cambridge University Automated Reasoning Group.
- Authored two papers for the Theorem Proving in Higher Order Logics journal and one in the Formal Methods in Computer Aided Design journal.
- Tutored undergraduate students in Computer Graphics, Type Systems and Numerical Analysis.

Learned to communicate technical ideas to expert and non-expert audiences through technical writing and presentations. Worked with industry to produce tools that are used to validate algorithms running on stock silicon.

## MA (Hons.) 1 st class, Computer Science, University of Cambridge

2000-2003

*Computer Laboratory; Caius College*

- Ranked fourth in University of Cambridge Computer Science Tripos 2003
- Schuldham Plate Nominee, awarded first class 2001, 2002 and 2003
- Gonville and Caius Academic Scholarship 2001, 2002 and 2003

# Skills

Agile Development Continuous Delivery	Introduced and successfully used Agile and Continuous Delivery systems and methodologies including collection of metrics, blameless post-mortems and continuous improvement systems
C++03 - C++14	15 years industrial experience, boost, cross-platform, concurrent systems
Python 2 and 3	11 years industrial experience, matplotlib, doctest, numpy, scipy
Java	4 years industrial experience, Eclipse RWT, Swing, concurrent systems
JavaScript	3 years light industrial experience, AngularJS
Operating systems and technologies	15 years industrial experience of Linux (mainly RHEL) 10 years industrial experience of Solaris and AIX
Functional Languages and proof systems	3 years research using HOL4/ML, ACL2/LISP and Maple. 2 years home use of Haskell
CI Systems	Jenkins 2, CMake, Docker, Packer, Puppet
Group Theory / Algebra	Group Theory/Algebra 2 years research and home experience, HOL4 and Coq
Tae-kwon-do	2 <sup>nd</sup> Degree Black Belt and Instructor