Winchester, Hampshire, UK
https://jamesreynolds.github.io
jum.reynolds@gmail.com

Dr. J Reynolds

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

Through out my career I have always pursued my technical learning and practised continual improvement. I have a love of mathematics and problem solving, and savour the challenge of achieving goals within the home and open source projects I have created and contributed to.

Skills

DevOps skills	Led the construction of a fault tolerant infrastructure-as-code implementation of the company website on AWS using Puppet and Docker with separate and instantly available development, test and production environments.
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 Open-source contributions to LLVM (Clang) and binutils/gcc
Python 2 and 3	11 years industrial experience, matplotlib, doctest, numpy, scipy Open-source contributions to numerous projects including gcovr
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	2nd Degree Black Belt and Instructor

Experience

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

- Directed four teams 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:

- Implementation work and mentor for micro-services architecture, licensing and CI/CD system
- Language lawyer for C++11/14 and python
- Head architect for top-level architecture planning or tie-breaking

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:

- Implementation work and design authority for web services, licensing and internal APIs
- Maintenance and development of Solaris and AIX products and cross-platform components
- Product and development direction, calculation of time-scales and priorities

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**

- 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**

- 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 18th and 20th 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

James Reynolds – jum.reynolds@gmail.com