

# Alexander Lamaison

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## Education & Qualifications

### 03/2014–present **Software Developer, Sky, London**

Created the Sky Service app for Android and iOS in Java and Objective-C, as well as the Ruby backend services to support it.

Led the design of the system architecture. Used my experience of distributed systems to ensure compatibility between independently released versions of app and service. Developed the strategy for gracefully retiring legacy versions.

Devised a method for non-programmers to invoke native app functionality from their hosted and embedded HTML content.

Made use of core algorithms & data-structures knowledge to design scalable APIs, implemented using Sinatra and Redis.

Encouraged the team to focus on quality through testing and CI. TDD with RSpec, Specta and JUnit. Acceptance testing with Calabash/Cucumber. Jenkins for CI.

Developed and documented a release process for app-store submissions. Eliminated risks using automation and inspection. Has stood the test of time with few changes.

Pushed the boundaries of continuous deployment for mobile apps.

### 09/2007–09/2012 **PhD Computing, Imperial College London**

Thesis: *Inferring Useful Static Types for Duck-Typed Languages*.

<http://www.doc.ic.ac.uk/~alw/edu/theses/lamaison-phd-0912.pdf>

- Research goal: better refactoring and IDE assistance for Python programmers, through static analysis.
- Implemented a Python abstract interpreter in Java. Modelled all language features and quirks. Can analyse real-world programs without modification or annotation. <https://github.com/alamaison/gander>

Gained deep knowledge of program analysis, compilers, language design and type systems.

Developed valuable research skills. Comfortable solving difficult problems without existing examples, literature or documentation. Learned to identify core concepts behind a problem, enabling existing solutions to be adapted and applied.

### 10/2003–07/2007 **MEng Computing, Imperial College London**

First Class honours.

Masters dissertation: *Finding what C++ Lost: Tracking Referent Objects with GCC*.

- Awarded IBM Project Prize.
- Awarded prize for best project presentation.
- Extended GCC C/C++ compiler to bounds-check allocated memory. Technique tolerant of real-world, non-compliant pointer arithmetic. <https://gcc.gnu.org/wiki/MIRO>
- Gained experience working with large existing code base.

Studied core computing principles and how they underpin reliable programming.

Learned to grasp new languages/technologies rapidly through independent study.

Courses included software engineering, logic & reasoning, concurrency, architecture, networks, databases, graphics.

09/1996–07/2003 **Duke of York's Royal Military School, Dover, Kent**  
**A Level:** Mathematics, Physics, Chemistry, Dutch, Computing (AS) at grade A.  
**GCSE:** 6 at grade A\*, 5 at grade A

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## Open source involvement

GitHub profile <https://github.com/alamaison>

12/2006–present **Lead Developer, Swish**

Created Swish project. Now a popular choice of SFTP client with around 4500 downloads per month. ([www.swish-sftp.org](http://www.swish-sftp.org))

Exploited opportunity to experiment with techniques and technologies.

Acquired extensive knowledge of Windows API. Became an expert in C++/STL, Boost and Git.

07/2009–present **Developer, libssh2**

Contributor to dependable, portable, security-oriented library written in C. Use by cURL, among many other projects. ([www.libssh2.org](http://www.libssh2.org))

Granted commit rights for quality of work. Exercised them with discipline and attention to detail.

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## Working Experience & Responsibilities

10/2009–12/2011 **Moderator, SEWORLD mailing list, SIGSOFT**

Maintained quality of content appearing on leading Software Engineering academic mailing list ([www.sigsoft.org/seworld/](http://www.sigsoft.org/seworld/)).

Sole moderator. Exercised independent judgement, confidently, in public.

Quickly developed broad knowledge of Software Engineering to judge submissions outside my fields of expertise.

09/2007–09/2012 **Subwarden, Imperial College London**

Supervised welfare of 125 undergraduate students in halls-of-residence. On call 24hrs. Handled challenging and diverse situations as they arose demonstrating flexibility, lateral thinking, creativity and ability to remain calm under pressure.

Voluntary role alongside PhD. Meeting a demanding schedule taught me good time management.

Planning and directing a full calendar of events throughout year made me an experienced manager and developed my organisational skills.

Appointed acting warden, with sole responsibility for budget, hiring and discipline, during warden's 6-month sabbatical.

04/2006–09/2006 **Storage Technology Group, IBM, Hursley, Winchester**

Worked on SAN Volume Controller storage virtualisation system.

Responsible for maintaining and debugging nightly build and test execution, and for reporting test failures. Improved test coverage and developed new test framework based on XML test descriptions.

Gained valuable industrial experience, and learned the importance of continuous automated testing.

Summer 2002 **Complete Computer Solutions, Wye, Ashford, Kent**

Delivered data collation and results analysis application for Richmond Tests used in schools.