Pete Woods

Lead engineer

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About me

The focus of my work is always quality. This includes technical aspects, such as: writing clear and comprehensive tests; code that you can look at and understand; making use of existing libraries; and continuous refactoring to maintain clean code. On the non-technical side, it includes: collaborating effectively with designers, other engineers, managers, and customers; and focusing on the issues when problems arise by sharing responsibility and avoiding blame.

This focus has shone through in my work at Canonical for my technical leadership over several projects, resulting in a *Spotlight Award* in 2016 where I was called out as a *a great role model*.

I am an extremely fast learner, getting productive in new areas and technologies very quickly. You can put me on almost any project and I will soon be effectively contributing, both technically and through leadership.

I'm never happier than when I can pass my experience on to my co-workers, especially when enabling them to write better code and enjoy their work more. Going out of my way to help and inspire my team-mates helps me develop close working relationships and friendships with them. If you check my LinkedIn recommendations, you should see this is corroborated by previous colleagues.

I have project management experience, being familiar with managing customer relationships and expectations throughout the development life-cycle. You'll find me: dependable; on-time for meetings; and able to put my opinions forward when needed, in a constructive and supportive way.

Skills

Languages	Java 11, C++14, SQL, BASH, GoLang, JavaScript, Ruby, Python, Ansible
Technology	Docker Swarm, Spring Boot (MVC, Data, Security, Cache), AWS (CloudFormation, ECS, EC2, RDS, etc), HAproxy, Nginx, Redis, MariaDB, ELK, Maven, Git, Jenkins, ReactJS

Experience

Surevine Ltd — Lancaster, UK (Remote)

2018–present	**Lead Engineer**, *Surevine Services*, (Java-based distributed systems).

- ○ **Projects** Following the 12-factor application model (simple config, no state, disposability, etc), I built secure, scaleable collaboration solutions for security-conscious organisations. My roles included: systems architecture; software engineering; DevOps; and general consulting.
- ○ **Continuous learning** With my enjoyment of teaching and learning from others, I initiated a weekly session (**Techcellence**) where myself and my co-workers could present on any topic that was tangentially related to work. I found this an excellent way of both sharing my knowledge, and learning in areas I might not automatically focus on.
- ○ **Technology** Identifying software packaging and release as a particular pain point within the company, I lead the adoption of containerisation and service orchestration. Specifically I selected Docker Swarm, due to ease of offline installs. This enabled customer-driven/owned installs, where previously lengthy on-site visits were required.

KDAB GmbH — Lancaster, UK (Remote)

2017–2018 **Senior Engineer**, *KDAB UK*, (Qt/C++ on Android/iOS and Java web services).
- ○ **Web services** I took a legacy internal business-critical Java EE application and overhauled it using Java 8 and Spring Boot, added automated unit and integration testing (JUnit and DBunit), a modern responsive front-end, while maintaining various stakeholder's needs.
- ○ **Mobile app development** Developed rich, fluid cross platform (Android and iOS) mobile applications for different clients, sticking to budgets and delivering high customer satisfaction.

Canonical Ltd. — Lancaster, UK (Remote)

2012–2017 **Senior Engineer**, *Ubuntu OS*, (Qt/C++ and GoLang on core Ubuntu OS).
- ○ **GoLang web services** I worked on Canonical's Snappy packaging / IOT / embedded platform for around 1.5 years adding additional REST APIs to support purchasing of packages.
- ○ **Ubuntu Mobile** I developed the lock-screen infographics from backend to presentation. I developed the voice control system, writing scripts to train CMU's Sphinx against the VoxForge speech corpus, creating language models for use in a simple command and control library. I worked extensively on the network management indicator to improve its quality.
- ○ **Testing enabler** I developed several C++ libraries (libqtdbustest, libqtdbusmock, unity-scope-harness, gmenuharness) to enable testing of projects that previously weren't testable at all, or only in a limited way. Here are examples of extremely readable tests using these libraries: indicator-network, indicator-sound.

BAE Systems: Applied Intelligence — Cheltenham, UK

2010–2012 **Principal Engineer**, *Electronic Systems Group*, (High-speed C++).
- ○ **Team leadership / management** I managed budgets and contracts for the business area's projects, ensuring timely and on-budget delivery. I led weekly SCRUMs and daily stand-ups.
- ○ **DevOps** I led the Agile development of an automated system for continuous deployment of a large and complex software stack based on RHEL using Ruby and Puppet. I created new testing tools to enable TDD of Puppet modules.
- ○ **High performance C++** I implemented high performance data structures using STL and Boost. I carried out performance tuning using a mixture of Valgrind and VTune. I optimised the product's test suite, reducing a complete run to under 5 minutes, down from over an hour.

2008–2010 **Senior Engineer**, *Systems Integration Business Unit*, (Java data fusion).
- ○ **Team leadership** After becoming the tech lead of a Java-based data fusion and visualisation platform, I instigated the use of Agile methods (SCRUM and TDD) to restore stability to a rapidly growing code-base (~1 million LOC) and team (25 engineers). This code-base is now integrated into BAE Systems' AML Compliance offering.
- ○ **Data visualisation** I built several data visualisation output plugins for the platform including: interactive graph node/pairs; traditional charts; and an OpenGL 3D GIS view using WorldWind.

2006–2008 **Consultant**, *National Security Business Unit*, (Oracle PL/SQL programming).
- ○ **Data migration** I led a small team developing and deploying a data migration solution using Java and Oracle PL/SQL.

Education

2004–2005 **MSc in Mathematics**, *Distinction*, University of York.
- ○ **Thesis** I researched automated methods for solving variable demand equilibrium network models. I compared generic classical methods, including simplex downhill search and simulated annealing, to more modern experimental and domain-specific methods. I presented the results at the national conference for *Mathematics in Transport.*

2000–2004 **BSc in Mathematics & Computer Science**, *1st*, University of York.