Robin Winslow Morris

Engineering manager; MSc Interactive Systems Design

Over 18 years in software engineering, I've designed and developed high performing full-stack web services and APIs across many languages and technologies including Python (Flask/Django), PostgreSQL, MongoDB and K8s. I've evolved and implemented continuous delivery pipelines and evolved team standards.

As a manager, I've formed, led and grown high performing engineering teams with high retention and strong engineering culture. I've designed roles and team structures, improved team interactions, resolved conflicts and worked closely with stakeholders and product owners at all levels.

I've been an active open-source contributor, publishing many open source projects and modules. I've mentored engineers, given many presentations on technical and non-technical topics, including at conferences and international company events, and written many blog posts and an academic journal paper.

Experience

Since June 2022 — **Head web architect**, *Canonical*
- Systems architect for the web engineering department
- Designed guiding templates for Python (Flask & Django) sites & APIs, React and static sites
- Mentored the 30 developers across the department
- Created and led a new platform engineering squad responsible for central modules, development and devops tooling to support our 30+ website and API projects
- Guided eight development squads, leading key architectural decisions across the whole department
- Led team standards for communication, simplicity, testing, usability, CD, accessibility & sustainability
- Ensured key documentation was written and shared
- Shifted responsibilities left, and improved team efficiency through automation

2017 to 2022 — **Manager and team leader**, *Canonical*
- 8 direct reports with record retention & progression across UK, Canada, Poland and spain
- Designed agile processes & team architectures
- Resolved conflicts between people and between teams
- Presented features and roadmaps at international company events
- Worked closely with stakeholders and product owners at all levels of the company
- Built team culture through presenting, writing, mentoring and leading by example
- Practised and advocated for respectful leadership principles
- Managed relationships and resolved conflicts with senior stakeholders
- Open source & ethics thought-leader

2014 to 2017 — **Lead developer**, *Canonical*
- Transformed hosting for ubuntu.com (up to 10k hits/sec), eliminating regular outages
- Transformed continuous deployment pipeline for 30+ sites with K8s
- Transitioned the team to GitHub, and designed project structure standards
- Took a leading role in team structure and practices

2012 to 2014 — **Lead developer**, *Hillarys*
Led development on 4 e-commerce sites including web-blinds.com in PHP (Magento and MySQL) and C# (Umbraco and MSSQL Server), and led the team to double in size.

2010 to 2012 — **Full-stack developer**, *IPC Media*
Key member of a 4-dev agile squad for 4 magazine sites including horse and hound and country life, within a department of 50 devs.

2005 to 2010 — **Lead developer**, *Energise, Mokoro and Tamar*
Year in Industry at Tamar as a Perl & CSS dev. Then dev, software and visual design consultant work for Tamar, Mokoro and Enterprise.

Bicester, UK

📱 *07795070704* • ✉ *robin@robinwinslow.co.uk* • 🌐 *robinwinslow.uk*

in *robin-winslow-morris* • ⌂ *nottrobin*

Notable projects

Projects where I had a leading role in both design and implementation:

Software design

2015 to 2022 **Modular architecture templates**
Architected the model structures for our 30+ Flask, Django and static sites, including designing our branching & testing models, GitOps CI configuration & suite of Python & Node modules.

2019 to 2021 **Cross-team API model**
Many sites follow a standard DDD-based API structure for the contractual relationship between the web department and engineering teams.

2015 **Assets server**
A cache-optimised, high-load, REST based server for hosting images and files for all sites. Served gigabites of assets for all of Canonical's digital services for 8 years with minimal changes without no outages.

2019 to 2021 **Security API**, *(100k hits/sec)*
Ubuntu's official public API for CVEs and Ubuntu security notices for security researchers across the world. Updated by Canonical's security team, it serves security data for all Ubuntu users to check vulnerability information.

2015 to 2020 **Vanilla Sass design system**
A central styling framework, written in SASS, for unifying design components, branding and styling code standards across the company's many branding areas. I helped design the technical architecture as well as the update and collaboration models.

Platform engineering

2019 to 2023 **Central hosting platform**, *(2k hits/sec)*
Advocated for, designed & implemented a Kubernetes-based reliable high-capacity platform for Canonical's 30+ websites and services including ubuntu.com.

2018 to 2023 **Web deployment platform**
Automatic continuous deployments with GitOps and Kubernetes to release changes to 30+ sites & APIs within 5 minutes of merges to main.

2017 to 2023 **PR demo system**
Automatic, unique, reliable demo for every pull request, deployed into Kubernetes with close parity with production. Enables quick, reliable staging, testing, QA and stakeholder review.

2015 to 2021 **Dotrun local development system**
A container-based tool to unify and simplify local development of our 100+ projects on both macOS and Linux systems.

Team building

2022 to 2023 **Hiring assessments**
Carefully designed custom early-stage assessments to optimise testing relevant skills and maximising the time of both team members and candidates.

2019 to 2021 **Masterclasses**
Delivered and led fortnightly department-wide skills-sharing presentations on diverse topics.

2019 to 2021 **Team practices**
A website, repository and system for discussing and agreeing on formal team standards and principles. A bedrock of department culture and discipline.

Education

2007 to 2010 **MSc Interactive Systems Design**, *Nottingham*, UK
- Learned to study and design solutions for large interacting socio-technical systems
- Studied cognitive systems interaction, usability and mobile design principles
- How to conduct and learn from social and user studies
- Published a journal paper on micro-generation schemes

2004 to 2007	**BSc Computer Science**, *Nottingham*, UK
	Studied functional programming, set theory, advanced logic, database normalisation, big O notation, algorithms & data structures, object oriented programming, unix systems, security principles, Java, Haskell, C++ and project management.

Publishing & presenting

April 2022	**Open source and its social impact**
	Presentation to the department with Anthony Dillon, published on YouTube
2018 to 2023	**Presented 10 masterclasses to the department**
	On many topics including: Advanced Git usage, effective testing, readable code, regex, systems design, writing and platform engineering
2014 to 2021	**22 posts on the Ubuntu blog**
	About our working practices & tools, configuring NGINX, running Ubuntu and many other topics
2012 to 2023	**Over 100 personal blog posts**
	On StackOverflow
2011 to 2021	**100s technical answers and questions**
	Across StackExchange sites
2012	**Micro-generation schemes: user behaviours and attitudes towards energy consumption**
	Journal paper in Ergonomics
2012	**HTML5 and how to use it**
	Presentation to IPC Media's digital department
2011	**Let's talk about CSS**
	Presentation to IPC Media's digital department

Open source contributions

I have created 32 Python packages, 23 NPM packages, 138 GitHub repositories and 151 public gists.

As well as all Canonical's websites, services and supporting modules and tools, I've contributed to many OSS projects across Canonical including MicroK8S, LXD, Snapcraft, snapd, Juju (including various Charms), Mojo, Anbox-cloud, Talisker (a Gunicorn wrapper) and discli (a Discourse API client).

Beyond Canonical, I've directly contributed code to many projects including docker-nginx, Kubernetes' NGINX Ingress controller, Pipenv, poetry, node-sass, sass-lint, git-extras, Sphinx, Renovate and Lando, and helped improve many more projects through community suggestions and discussions, including Kubernetes, NGINX, Python and Discourse.

Skills

Languages & frameworks	Python (Flask, Django), PHP (Symfony), C# (Umbraco), Bash, JavaScript (React, Backbone, jQuery), Typescript, Node (Express), Perl (Catalyst)
Software & platforms	Kubernetes, PostgreSQL, Redis, MongoDB, NGINX, Apache, Jenkins, Sentry, Graylog, Grafana, ChatGPT, Git, GitHub Actions, Openstack, AWS, GCP
Theory & best practice	No-blame culture, Respectful leadership, Behaviour-driven development, Minimum-viable product, Continuous delivery, KISS, YAGNI, progressive design, platform engineering, the 12 factor app, progressive web apps

References upon request

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