

Felix Hanley

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Software Engineer / Architect / Technical lead

My experience covers applied cryptography, network & database programming, bare-metal and cloud-based hosting environments, in a number of different industries. I am able to architect and build new systems for complex problems as well as analyse and diagnose existing systems for security and performance issues. I am proficient in a variety of programming languages, now predominantly Go.

I enjoy technical team leadership, both working towards a quality and efficient product, and helping others get the satisfaction of the “craft” of software engineering.

My publicly available source code is available at <https://dev.userspace.com.au> and also [GitHub/GitLab](#).

References available on request

Principal Software Engineer, **Tönnjes** (*October 2023 – present, Remote*)

A world leader in secure identification.

Currently the architect and technical lead for all core services, libraries and APIs for use in global manufacturing processes, an API driven SaaS, and mobile applications.

- Design and lead for SaaS development, custom network appliances, SDKs & libraries
- Implementing ISO/IEC 20248 and extensions for use in RFID and NFC data carriers (*Go, WASM*)
- Architecture and implementation of custom PKI and related services (*Go, X.509, ASN.1*)
- Acting engineering manager
- Assessing security and policy constraints for private and government applications
- Strong focus on efficient, high performance services for use in global manufacturing
- Design and deploy cloud & VM based infrastructure (*AWS, Terraform, OpenTelemetry*)
- Development of shared libraries to support device application development

Principal DevOps Engineer, **MYOB** (*April 2019 – October 2023, Melbourne*)

An Australian multi-national corporation that provides accounting software to small and medium businesses.

As a principal engineer I was across a number of areas as a technical lead, particularly in the observability space and DevOps services.

- Architecture and implementation of centralised event processing service (*Go, AWS, OpenTelemetry*)
- Development of a distributed tracing service (*Go, OpenTracing, Kubernetes, AWS*)
- Architecture and lead for centralised service catalogue (*TypeScript*)
- Mentoring and coaching across multiple teams
- Strong focus on system performance, reliability, and cost efficiency

Senior Software Developer, **Seer Security** (*July 2018 – April 2019, Melbourne*)

A small security business with products used by a number of government agencies.

I was the architect and lead for a social-network content extraction and classification engine, built to government specifications.

- Developed a distributed content extraction engine and plugin architecture (*Go, Python, PostgreSQL*)
- Developed content extraction logic for multiple platforms and APIs (*Javascript, Python*)
- Maintained extensive tests and CI integration using machine learning datasets (*Gitlab, Docker, AWS*)

Senior Software Engineer, **Freestyle Technology** (*June 2017 – July 2018, Melbourne*)

An IoT technology company providing hardware and software solutions to service providers and municipalities across SE Asia and Australasia.

As a senior engineer I was responsible for the design and architecture of a custom processing pipeline, ingesting a huge amount of data from large deployments of devices in multiple countries.

- Developed distributed network stream processing engines ingesting from millions of devices (*Go*)
- Designed and implemented numerous supporting APIs (*Python, Awk, Shell, Docker, AWS*)
- Designed, implemented and administered supporting services and infrastructure (*PostgreSQL, PL/pgSQL, InfluxDB, TimescaleDB*)
- Maintained excellent test coverage and CI services (*TAP, Jenkins, Groovy*)

Senior Software Engineer, [KL Data/ARKpX](#) (2015 – 2017, Remote)

A small team developing a cross-platform, encrypted storage solution much like ‘Dropbox’ but using client-side, PKI cryptography. Products in use by multiple government departments. Previously called ‘LockBox’.

As the lead developer on the core cryptographic library I implemented numerous primitives and reusable components to be used by multiple front-ends.

- Lead development of core cryptographic library, implementing PKCS primitives and Java key store (JKS) implementation (*Javascript*)
- Developed custom ASN.1 schemas for CMS (RFC 5952) communications (*ASN.1, X.509*)
- Created extensive cross-browser test suite and maintained CI (*Node, Bamboo CI, Selenium*)

Software Engineer, [Ayuda Hosting](#) (2010 – 2015, Melbourne & remote)

A traditional, “bare-metal” hosting and consulting company with a small team based in the Melbourne CBD.

As a senior engineer I was involved in all areas of network design & security, project planning & cost estimation, client programming and consulting.

- Managed large, redundant networks, firewalls and VMs (*Xen, Keepalived, IPTables, IPSec, PF*)
- Developed numerous client websites and applications (*PHP, Javascript, HTML/CSS*)
- Developed custom control panel and billing software (*PHP, SQL, Shell*)
- Developed in-house CMS software with a custom ORM and plugin system
- Implemented large configuration systems (*CFEngine, Puppet*)
- Administrated highly available and redundant server clusters (*Apache, Nagios, Postfix*)
- Brought many large projects to completion

Solution Architect, [UserSpace](#) (2006 – present, Melbourne, Asia & remote)

As a consultant I have worked closely with clients in Australia and South East Asia.

Most recently:

- Consulting for the ISO/IEC 20248 (DigSig) 2021 revision, particularly the applied cryptography components
- Design and development of DigSig solutions for Thailand government agencies (*Go, Javascript, WASM*)
- Design and development of custom machine learning pipelines for Thai language customers (*Go, Python*)
- Provisioning of BSD based hosting services including highly available databases and load balanced servers (*BSD, Ansible, HAProxy, Postgresql*)
- Providing free, privacy focused DNS services (*PowerDNS, TinyDNS, Python*)

Over the years:

- Developed custom hosting control panels (*Go, AngularJS, Ruby on Rails, Shell*)
- Developed and maintained custom support and monitoring software for clients (*Python, Shell*)
- Designed and built custom REST API for a number of SaaS clients (*Go, Sinatra*)
- Designed and built custom e-commerce integrations for international clients (*Magento, Spree, Ruby, SQL, PHP, XML*)

Web developer, [Sensory Networks](#) (2005 – 2006, Sydney)

Developed and maintained internal, cross-continent warehouse application (*PHP, HTML, CSS, Lua, MySQL, XSLT*)

Programmer/analyst, [Contract __](#) (2002 – 2005, Outback Australia)_

Custom solutions for mining contractors. Deployment of BSD VPNs, LDAP and email systems.

Programmer/DBA, [National Telecoms Group](#) (2001 – 2002, Sydney)

Development on a large CRM used by 300+ seat call centers (*VB, SalesLogix*)

Programmer/Sysadmin, [DefineIT/Macquaraine Health](#) (2000 – 2001, Sydney)

Hardware support and maintenance of C/C++ code.

Volunteering

- Radio presenter for community radio station
- Audio technician for multi-lingual translation office

Education

2001 Bachelor of Computer Science and Software Engineering, [The University of Sydney](#)

1994 Bachelor of Applied Science and Computer Technology, Swinburne University (*deferred*)