OLIVER ERNSTER

Senior Python Engineer specialising in design time system thinking, architectural ownership and production-grade platforms.

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PROFESSIONAL PROFILE

Senior Python Engineer and Technical Lead with extensive experience delivering cloud-native, API-driven and security-sensitive platforms across defence, fintech, telecoms and enterprise environments. Combines deep hands-on Python expertise with architectural ownership, technical leadership and delivery accountability. Trusted to lead complex programmes, modernise legacy systems and operate in regulated and defence-grade contexts where reliability and security are critical.

LEADERSHIP & DELIVERY SUMMARY

- End-to-end technical ownership of cloud and API platforms, from architecture and design through production delivery and operational support
- Proven technical leader with experience leading and mentoring teams of up to 17 engineers across defence and enterprise programmes
- Strong track record modernising legacy and non-REST systems into scalable, maintainable Python 3 platforms
- Regularly entrusted with high-impact systems in secure, regulated and mission-critical environments
- Operated as the senior technical authority across engineering teams, stakeholders and delivery partners.

Creator of CrankTheCode.com, a technical engineering blog illustrating production-grade software design, deployment, resilience and tooling strategy. Posts focus on concrete outcomes, trade-offs and system thinking rather than buzzwords or surface-level summaries. Demonstrates deep experience in Python, system architecture, UI engineering, and long-term reliability.

Languages: Python: 13 years (2/3), C: 4 years, C++: 15 years, JavaScript 6–7 years, jQuery 2–3 years, HTML/CSS 6–8 years, React/Typescript 1.5 years

Source Control Tools: Git, TortoiseSVN, GitLab, SVN, TortoiseHg (Mercurial), PVCS, Visual Source Safe, Gerrit, MKS Integrity/MKS Source, ClearCase.

Libraries/Build tools: Qt, PyQt, STL, Boost, Bootstrap, Chart.js, Leafletjs, Hudson, Cruise Control, Jenkins.

Technologies: AWS 3 years, Django 6–7 years, FastAPI 4–5 years, Flask 6 months, NGINX, Docker, Apache

Protocols: VoIP/SIP, ISDN/Telephony, Q.931, RTP, 2G (GSM), RESTful Web Services, Sockets, JSON, 3G (RRC only), TCP/UDP, MIKKE-SAKKE.

Databases: MySQL, PostgreSQL, Redis, MariaDB, SQLite3, CassandraDB, MS SQL Server, CouchDB, MongoDB

Methodologies: Agile, Extreme Programming, KANBAN, Waterfall.

Career history (most recent first)

Cisco - Senior Python Developer (Consultancy) - June 2025 through November 2025

- Led the modernisation of multiple legacy backend systems, converting non-RESTful PHP and Python 2 implementations into well-structured, RESTful Python 3 services.
- Took ownership of architectural decisions affecting deployment, maintainability and long-term platform stability. Improved platform stability by upgrading Django platforms, dependency stacks and delivery reliability through idempotent, automated deployments.
- Delivered a modern React/TypeScript user interface, significantly improving usability and stakeholder confidence in the platform.

Harrier - Lead Python Developer (Startup) - November 2024 through February 2025

- Sole technical owner for a cloud-based land intelligence reporting platform.
- Designed and delivered a serverless Python backend using AWS Lambda and Zappa, handling data ingestion, processing and reporting.
- Built a complete AWS infrastructure using Terraform from first principles, enabling repeatable, secure and scalable deployments.
- Operated with full responsibility for technical decisions, delivery outcomes and system reliability.

LTI Mindtree - Lead Python Developer (Consultancy) - February 2023 through August 2023

- Led the conversion of a MuleSoft-based API into a modern, maintainable FastAPI Python 3 platform.
- Played a central role in defining architecture, coding standards and documentation quality.
- Delivered a simplified, lower-cost API solution that improved long-term maintainability and reduced operational overhead, while ensuring continuity for downstream consumers.

EPAM - Lead Developer (Consultancy) - August 2022 through November 2022

- Acted as technical lead on the design and prototyping of a cloud-based flood insurance API.
- Influenced architectural direction and delivery approach in a regulated, multi-stakeholder environment.

Thales - Senior Developer (Cyber Resilience & Defence Research) - September 2021 through December 2021

- Engineered a multithreaded, socket-based backend with a Flask front-end to support cyber resilience modelling and visualisation in a defence research context.

Unilink - Senior Developer - March 2021 through September 2021

- Worked as part of a small, senior team to build secure, reliable communication software designed to support family contact and reduce reoffending rates.
- Balanced technical delivery with sensitivity to operational and regulatory constraints.

Validus Risk Management - Senior Developer (FinTech) - October 2020 through March 2021

- Contributed to a regulated wealth management and risk analysis platform, delivering enhancements aligned to analytical and business requirements.

Memset - Senior Developer (Cloud Platform) - August 2019 through October 2020

- Enhanced core cloud platform features and contributed to platform-level design discussions within a pure cloud engineering team.

Hewlett Packard - Senior Developer / Project Technical Lead / Scrum Master - December 2012 through February 2014

- Led a 17-person, multi-disciplinary engineering team delivering a large-scale defence programme.
- Held responsibility for technical direction, delivery planning and cross-team coordination.
- Acted as Scrum Master, improving delivery predictability, team coordination and overall programme execution.

Earlier Career (Selected)

- Held senior engineering roles across defence, fintech, telecoms and startup environments including Northrop Grumman, Armour Communications, Bink, Duologi and Anite, progressing through technical and leadership roles in secure and regulated environments.