



## OLIVER ERNSTER

CTO-level Technical  
& Engineering Leader

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### Decision Architecture (Published Work)

Author of the Decision Architecture series, a four-part body of work examining how decision making systems, authority structures and organisational design determine engineering outcomes.

This work focuses on the structural causes of delivery success and failure, including:

- Decision latency and its impact on system behaviour
- Authority boundaries and ownership clarity
- Structural failure modes in technical organisations

The series reflects my approach to engineering leadership: designing systems where decision flow, authority and architecture are aligned to reduce coordination cost and improve delivery predictability.

Available via Amazon (Kindle, paperback, hardback)

[crankthecode.com](https://crankthecode.com)

CTO-level technologist focused on decision systems, authority alignment and the structural causes of delivery success and failure.

I design and build systems that reduce coordination cost, improve delivery predictability and align execution with real business outcomes.

### What I am known for

- Setting technical direction before implementation begins, reducing downstream complexity and coordination cost
- Identifying structural causes of performance and scalability problems, not just technical symptoms
- Defining system architecture to reflect real product behaviour, constraints and incentives
- Enabling engineers to operate effectively through clear boundaries, delegated authority and well-defined interfaces

### Engineering leadership and technical scope

#### Product, systems and delivery strategy

- End-to-end system architecture and design-time decision making
- Performance modelling, latency analysis and scalability planning
- Translating product requirements into durable technical direction

#### Technical leadership and governance

- Architectural ownership across teams and stakeholders
- Delegated authority, boundary definition and decision clarity
- Technical governance in regulated and high-risk environments

#### Platforms and foundations

- Cloud-native platforms, backend services and APIs
- Automation-first delivery, infrastructure as code and operational reliability
- Python, JavaScript, TypeScript, SQL, AWS, Linux

## 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.
- Owned architectural decisions affecting deployment, maintainability and long-term platform stability, including platform upgrades, dependency rationalisation and the introduction of idempotent, automated deployment practices.
- Established a modern React and TypeScript user interface, materially improving usability, stakeholder confidence and the operability of the platform.

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

- Served as sole technical owner for a cloud-based land intelligence reporting platform, shaping system architecture, delivery approach and operational posture.
- Designed and implemented a serverless Python backend using AWS Lambda and Zappa, supporting data ingestion, processing and reporting pipelines.
- Defined and built the complete AWS infrastructure using Terraform from first principles, enabling repeatable, secure and scalable operation.
- Held full accountability for technical decisions, system behaviour and reliability under real-world operational constraints.

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

- Led the replacement of a MuleSoft-based API with a modern, maintainable FastAPI Python 3 platform.
- Set architectural direction, coding standards and documentation practices to improve long-term maintainability and team effectiveness.
- Produced a simplified and lower-cost API solution, reducing operational overhead while preserving continuity for downstream consumers.

### EPAM – Lead Developer (Consultancy) – August 2022 through November 2022

- Acted as technical lead for the design and prototyping of a cloud-based flood insurance API.
- Influenced architectural direction and delivery approach within 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

- Contributed to the design and implementation of secure, reliable communication software intended to support family contact and reduce reoffending rates.
- Balanced technical decisions against operational, ethical 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 with analytical requirements and business objectives.

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

- Enhanced core cloud platform capabilities and participated in platform-level architectural 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 contexts.