

Twenty years of hands-on JVM engineering, specializing in Scala, functional programming, and distributed systems. Has shipped across domains: event-sourced ledger infrastructure at Digital Asset, high-traffic product engineering at Canva, and multi-tenant e-commerce platforms. Strong focus on performance analysis and optimization — from JVM-level tuning to pipeline throughput benchmarking — and a track record of building observability tooling that makes complex systems debuggable. Brings a rigorous, type-safe approach to system design — ZIO, dependent types, macros, and Haskell-influenced FP. Has a secondary specialty in language tooling: IntelliJ plugin development, custom syntax parsers, and polyglot code generation pipelines.

TECHNICAL EXPERTISE

Languages	Scala, Java, Kotlin, Haskell/Daml
Core Concepts	Functional Programming, Reactive Systems, Event Sourcing, Language Design, Dependent Type Programming, Distributed Systems, Concurrency, Performance Analysis & Tuning
Databases	PostgreSQL, Oracle, SQLite
Key Technologies	ZIO, scala macros, scalaz, cats, fastparse, protobuf, Kafka
Tools & Platforms	mill, bash, Makefile, git, docker, AWS, GCP
Language Design	Syntax Parsing, IntelliJ Plugin Development, Code Generation
Methodologies	TDD, BDD, DDD, Agile, CI/CD, DevOps

PROFESSIONAL EXPERIENCE

- Jun 2017 – Nov 2025 **Staff Software Engineer** | Digital Asset, Australia
Designed and built a data storage layer for querying event-sourced data, supporting efficient historical snapshot analysis.
Led design of code generation pipelines that auto-generated codecs for multiple protocols and target languages, eliminating significant boilerplate.
Built an interactive FRP-based shell for inspecting ledger transaction history.
Wrote a performance testing suite to measure and improve read/write throughput of a PostgreSQL-based storage solution.
Co-authored functional testing framework for container-based component quality assurance.
Implemented an IntelliJ plugin for the Daml language.
- Aug 2016 – May 2017 **Senior Software Engineer** | Canva, Australia
Developed and improved core editor features in a high-traffic production environment.
- Feb 2011 – Jul 2016 **Senior Software Engineer** | Tacit Knowledge, Moldova / Australia
Led architecture and development of a multi-tenant PaaS solution using Grails, Hybris, Groovy, Java, Scala, and Akka.
Designed and implemented PCI-compliant payment integration with Cybersource using Akka/Scala.
Performed performance and reliability analysis for distributed e-commerce systems.
Built an internal “Degradation Proxy” tool with Netty for reliability testing.
Researched and implemented visual search algorithms for product discovery.
- Jan 2009 – Jan 2011 **Software Engineer** | Endava, Moldova
- Feb 2006 – Sep 2008 **Junior Software Engineer** | NetCracker Technology, Russia

EDUCATION

- 2009 **Master of Science in Applied Physics and Mathematics** | Moscow Institute of Physics and Technology, Russia