

# Ivan Krechetov

- 🌐 <https://ikr.li>
- 🏠 CH-8404 Winterthur
- ✉ ikr "at" ikr.li

## Summary

Highly experienced *full-stack* Senior Software Engineer / Tech Lead, presently proficient in:

- Scala, Clojure, Kotlin
- Rust and C++
- Functional Programming
- Domain-driven Design
- Actor Model for Reactive Programming
- Event Sourcing / Command Query Responsibility Segregation (CQRS)
- Algorithms and Data Structures

Proven ability to quickly onboard into new business domains and technologies, ready to assimilate and revitalize even seemingly unmaintainable legacy systems. Want to solve practical problems with well-crafted software that *actually works*.

## Experience

### 04/2020–now SIX Digital Exchange (SDX), Zurich

SDX belongs to the SIX Group, a leading Financial Market Infrastructure (FMI) provider in Switzerland. Among other things, SIX operates the Swiss Stock Exchange. SDX leverages blockchain technology to innovate the FMI, building bridges from the established regulated environment into the space of Web3, smart contracts, and cryptocurrencies.

Role: **Senior Software Engineer**.

Contribute to the Central Securities Depository subsystem; integrate with SWIFT (ISO 20022/15022), enable sanction screening capabilities, maintain the core data service.

Re-implement relevant Corda API for a shorter development feedback loop.

Build and maintain a scalable event-sourced actor-based financial infrastructure applications platform (Functional Core / Imperative Shell, CQRS).

Implement an OpenAPI Spec client code generator.

Tech: Scala Akka ZIO Clojure GraphQL XTDB/Datalog Kotlin OpenShift/AKS Kubernetes Corda.

### 08/2018–03/2020 Digitalparking, Dietikon

Swiss market leader for B2B and B2C car parking solutions. The company began decades ago by building mechanical parking meters and parking gate systems, and has since grown into a digital solutions provider.

Role: **Web Developer**.

Contribute to full-stack web applications development in the domain of on-/off-street car parking: *Parkingpay.ch*

and other mobile & desktop apps. The system is used by 100K+ drivers weekly. It's also serving parking zone operators and controllers.

Gradually raise the compiler strictness for both the back-end and the front-end to the highest level, resolving hundreds of warnings.

Introduce new direct debit applications and automatic demand letters (physical) for missed payments.

Rework several customer use-cases in Settings and Payments.

Implement a partner application for Coop.

Tech: Kotlin Java jOOQ/PostgreSQL TypeScript React.

### 10/2006–07/2018 XIAG, Zurich, Winterthur

Custom software development company.

Role: **Tech Lead**.

End-to-end planning, design, implementation, and maintenance of custom software systems, leading a small autonomous development team. Most significant projects:

- *SwissHotels.com* B2C booking platform with dozens of specialized partner sites
- *Trade.stc.ch* B2B hotel booking used by travel agencies and airlines
- *Ostjob.ch* job portal, with a few forks; integrates with hundreds of publishing channels
- MS Windows-native digital photo prints ordering software for *ifolor AG*

Tech: JavaScript Redux/React Elm Angular Node.js PHP Silex Zend-Framework Nginx PostgreSQL Redis CouchDB Sphinx Linux SaltStack C++/Win32 WTL/ATL GDI+

### 10/2003–09/2005 XIAG, Novosibirsk

Custom software development company.

Role: **Managing director**.

Run the offshore development center of XIAG AG in Russia. Estimate projects, prepare technical specifications, coordinate the resources, ensure the delivery, hire software developers.

### 04/2002–09/2003 Center of Financial Technologies, Novosibirsk

A large banking software vendor, and a Financial Market Infrastructure builder.

Role: **Programmer**.

Work on the application development tools for a company's own banking software platform. Improve user experience, speed up routine tasks — recognized with two peer bonuses.

One of technical challenges: support a huge Visual Basic 5 code base, that was constantly crashing Visual Studio, and required a special compilation ceremony. Mitigation measure: extract the most frequently changing parts into a C++ dynamically-linked library.

Tech: Oracle Visual-Basic-6 C++/Win32 COM

## 10/2001–03/2002 iNetLab, Novosibirsk

Custom software development company.

Role: **Programmer.**

Build a visual model editor in the field of seismic geophysics. The tool enables a faster iteration within a simulation pipeline of an oil company. Maintain other small applications.

One of technical challenges: infer domain logic from an unfamiliar Fortran code base.

Tech: Java Java2D/Swing C++/Win32 Visual-Basic-5

## 10/2000–09/2001 Auktion24, Novosibirsk

The company that has originally built *Ricardo.ch*

Role: **Programmer.**

Take part in building *WeTellYou.com*, a global expert exchange platform with billing and telephony capabilities. Work on the chat module and implement some of the core Q&A use cases.

Tech: Java Linux Apache-JServ XSLT Oracle Java-RMI

## 03/2000–09/2000 Glance, Zurich

Role: **Junior Programmer.**

Build a data model editor and code generator for a company's proprietary object-relational mapping library. On one's own initiative, implement an unlimited undo/redo capability. Also, maintain an insurance line of business application.

Tech: C++ Win32 MFC Oracle

## Education

### 10/2005–10/2006 University of Twente, Enschede NL

**PhD associate.** Research topic: Aspect-oriented software architecture design. Quit the PhD program, changed to industry work.

### 2001–2003 Novosibirsk State University

**MSc in Applied Mathematics and Informatics.** Graduated with honors.

### 1996–2001 Novosibirsk State University

**BSc in Mathematics.** Graduated with honors, all “excellent” – top 2% of students.

## Personal info

Citizenship	Swiss
Languages	English (fluent), Russian (native), German (~C1 de facto, B1 in 2013)
Relevant hobby	Competitive programming in C++ and Rust