

Jerome Kehrli

Technology Evangelist and
Seasoned Manager in IT

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Age 41



Professional experiences

January 2018 **NETGUARDIANS S.A**, Yverdon-les-Bains, 5 years.

- Present

CTO

I am inventing the next generation Artificial Intelligence for Fraud Detection and Prevention by leveraging on Big Data Analytics to take on the worldwide Banking Payment Fraud Detection market.

January 2016 **Head of R&D.**

- December 2017

Accountable for all the Product Development Activities at NetGuardians.

Responsible of a 30+ international team of highly skilled software engineers.

January 2015 **R&D Manager.**

- December 2015

Head of the Development team and Lead Architect on NetGuardians' flagship and cutting-edge behavioral analysis software solution.

November 2013 **OCTO TECHNOLOGY (SUISSE) S.A**, Lausanne, 14 months.

- December 2014

Senior Consultant.

Consulting missions throughout Europe in the following fields : Software architecture and general IT projects scoping and audits, Development methodologies and Agile project management, New technological opportunities and innovation initiatives in Big Data, NoSQL and Cloud computing.

January 2012 **CREDIT AGRICOLE - PRIVATE BANKING SERVICES**, Lausanne, 5 years - 6 months.

- October 2013

Lead Software Architect.

Lead software architect focused on the definition of the technical software architecture as well as all technical aspects of the development of the home made private banking ERP written in Java technologies.

In addition, I managed a team of a dozen architects involved in the business modules development scoping as well as the development team working on the technical framework.

May 2008 **Java EE senior Architect.**

- December 2011

Member of the Java / EE architecture team responsible for the coming transition to Java technologies of the home-made private banking ERP.

I was mostly focused on design, performances, ORM concerns and legacy integration. I was the lead engineer on the server-side technical stack.

August 2007 **ACM - ADVANCED CURRENCY MARKETS S.A**, Geneva, 9 months.

- April 2008

Senior Software Engineer / Java Architect on the real-time trading platform.

Software architecture and developments for the real-time trading platform engineering and enhancement. I was mostly responsible for the re-engineering of the real time software stack taking care of all B2B interactions with the banking partners.

January 2005 **MORGAN STANLEY CAPITAL INTERNATIONAL S.A**, Geneva, 2 years - 7 months.

- July 2007

Senior Software Engineer / Java Architect for the equity benchmark production division.

Senior Software engineer for Morgan Stanley Capital International. Java / SOA development in the room of distributed computing and real-time calculators.

I was in charge of the technical aspects of the distributed index calculation platform.

July 2002 **ELCA INFORMATIQUE S.A**, Lausanne, 2 years - 6 months.

- December 2004

Java and Java EE Consultant.

Software Consultant and Project Manager for Elca. Software development, management and consulting in the room of Java, Java EE and XML technologies.

I mostly worked on projects for the major swiss insurance companies.

Education

- 2009 - 2012 **HES-SO - University of Applied Sciences of Western Switzerland**, Lausanne.
(2 years + **MSc, Engineering - Computer Science**
Master Thesis) Graduated summa cum laude, Major of Promotion.
Master Thesis on Markowitz MV and CVaR Portfolio analysis and optimization using heuristics (QP), linear and non-linear solvers in R with an online Web 2.0 GUI.
→ Optimization (meta-heuristics, [Quasi-]Newton methods, Linear Programming, Integral Linear Programming, etc.) → Software Security and Ethical Hacking → Theoretical Computer Science
→ Cryptography → Advanced algorithms → Ubiquitous and parallel computing → Applied Statistics
- 1998 - 2002 **HEIG-VD - School of Business and Engineering, Vaud**, Yverdon.
(3 years + **Software engineering degree**
work of diploma) Work of diploma on Distributed Programming with Java, RMI and Unix (Linux).
→ C/C++, Ada, Java languages → Object Oriented Design and Programming → Concurrent programming → Engineering Mathematics → Distributed Programming → DBMS → Operating Systems

Professional skills

- General **Seasoned Manager in Information Technology** and **Highly skilled Software Architect** with over 18 years of experience in the financial services sector (Private Banking, Consulting, FinTech Startups, etc.). Rich experience combining Software Architecture and Technological mastery with strong assets to set up and lead high-performance teams.
Precise, methodical, pragmatic, proactive, fast, acting with energy and tenacity, fluent in both Team and Project Management as well as Software Architecture at all levels, with an outstanding ability to understand and anticipate business expectations.
Excellent aptitude to communicate, listen, persuade and negotiate. Excellent ability to simplify, educate and convince.
- Executive skills Management of several 30+ Highly-skilled Engineering Teams, Management 3.0, Agile in general, Kanban, Scrum, DevOps and Lean Startup enthusiast.
- Technical / Technological specialities Distributed and Real-time systems, Parallel and Concurrent programming, Reactive Programming, Java and lightweight stacks (Spring / Hibernate), Web 2.0 and RIA, XML technologies, Unix (mastering of Linux), Big Data and NoSQL landscapes, Data analytics, Advanced Algorithms, Machine Learning and financial computing systems.

Major achievements

- 2015 - 2020 **AI and Big Data Revolution at NetGuardians**
NetGuardians I have been hired to lead the R&D Team of NetGuardians with a precise mission statement: implementing Big Data Technologies and Artificial Intelligence within NetGuardians' flagship behavioural analysis software solution.
I built on the strengths of NetGuardians - the Data Collection Framework and the business expertise captured by the platform - and addressed its weaknesses - widen the field of possibilities, extend the possible depth of analysis and enable new algorithmic approaches by integrating key and cutting edge Big Data technologies and ML.
I also built the development team from the 4 initial FTEs to an international Software Development Department with 30+ FTEs leveraging on State of the Art Agile Development Methodologies.
- 2013 - 2014 **Top notch consulting missions in Software Architecture**
OCTO Technology I was working as a consultant for OCTO Technology mostly for the top french banks such as BNP Paribas and Credit Agricole but also for swiss companies. My main areas of expertises were: Software Development project scoping based on a 360 methodology involving agile functional scoping, 4-levels architecture definition (functional, application, technical and system), project plan definition and risks analysis; Audits of Information Systems and Software Development departments; Big Data Analytics and NoSQL deployment projects in banking institutions and Seminars and workshops around Big Data or Digital strategy.

- 2008 - 2013
Credit Agricole
PBS
Home-made flagship private banking ERP.
I was working on the architecture of the new private banking platform. I was the lead engineer on the server-side technical stack and was responsible for the definition of the technical architecture of the private banking ERP. I was also deeply involved in all enterprise software architecture decisions.
In addition, I kept myself involved in the implementation of the trickiest pieces of software. Noteworthy things I have realized on my own are for instance, the TN3270 screen-scraping stack, the home-made JDBC driver used to reach the Datacom DB database on the IBM zSeries Host as well as the custom ORM relationship management framework based on hibernate and javassist.
- 2011 - 2012
HES-SO
MSc Master Thesis
AirXCell - Cutting-Edge Financial Portfolio Optimization
I designed and implemented AirXCell, an online calculation software dedicated to quantitative research in Finance. It provides financial engineers with a dedicated tool to perform all their tasks including portfolio valuation, analysis, simulation, rebalancing, optimization, etc. AirXCell combines a powerful calculation engine based on R with a cutting edge, user friendly, efficient and complete Graphical User Interface.
- 2007
ACM - Advanced
Currency Markets
Home-made real-time Trading platform.
I took the B2B connectors out of the main Business Server from the trading system and made from them an independent B2B dispatching server. This full Java server (no Java EE), is connected with the Business Servers through JMS. This was a key refactoring for enabling ACM's business backend to reach the required level of performance. In addition, it provides a much better separation of concerns between the B2B specific logic and the private ACM business logic.
From what has always been the most problematic piece of software at ACM, I made a robust and very scalable real-time server.
- 2005 - 2006
MSCIBarra
Global Equity Benchmark calculation platform.
First I realized the new product generation framework on top of Java, hibernate and Pico (IOC). The mapping from the DB to Business Objects is realized with hibernate, and the mapping from BOs to final products is realized with runtime reflection and XML mapping files. This framework generates now more than 80% of the MSCI products. Then I mostly worked on the main index calculator (Standard and V/G equity benchmark). As an architect, I led a team who took what was roughly a batch application and made from it a distributed calculator (managed and connected through JMS), highly multithreaded and able to answer many heavy requests at a time. Data load and save are asynchronous (pre-fetching and caching). Even within one single calculation session, most of the computing is multi-threaded.
- 2002 - 2003
Elca Informatique
Disasters and Services Management application.
Development of a disasters and services management application for a major swiss health insurance. The multi-tiers architecture is realized on top of J2EE and deployed on IBM Websphere / DB2 iSeries.
In the context of this project, we developed a whole EJBs framework (XDoclet, SLS beans) and an XML presentation framework (java → XML → HTML through XSL).
- 2001 - 2002
HEIG-VD
Diploma work
Real-time distributed Calendar Management application.
Development with Java/RMI of a calendar management application enabling the remote consultation and edition of appointments and events from Internet.
The implementation of a real time reconciliation protocol enables the immediate synchronization of the changes performed by two several distinct users working simultaneously on the same time area of the same calendar instance.

Languages

French	Native proficiency
English	Full professional proficiency
German	Limited working proficiency