

Andrea Merli - CV

Curriculum Vitae

Personal Information

First Name / Surname: Andrea Merli

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Date of Birth: January 29, 1972

Work Permit in Switzerland: C – Residence permit

Personal Profile

I possess a robust interdisciplinary background encompassing physics, finance, and risk management, complemented by extensive experience in information technology, particularly within the financial sector. My professional tenure includes a partnership role as a software developer and architect at Innoveo AG, a Zurich-based software firm, where I contributed for approximately seven years. Additionally, I am a certified professional risk manager, equipped with in-depth expertise in asset management, derivatives, financial markets, and comprehensive risk management frameworks.

In addition to my professional endeavors, I have pursued advanced studies in big data, data engineering, and blockchain technology through a combination of university courses, accredited online training, and independent research. I hold a Master of Advanced Studies (MAS) in Finance, during which I focused on blockchain-based decentralized finance (DeFi), specifically examining lending protocols, flash loans, and DeFi primitives. Furthermore, I operate an Ethereum node to facilitate personal research in this domain. To enhance my research and development processes, I leverage artificial intelligence tools, employing an iterative methodology to systematically structure and refine my approach, define deliverables, and assess the quality of the final outcomes. Demonstrations of these achievements are available for review.

Selected Achievements

- As **personal projects** utilizing AI.
 - Developed a tool for monitoring the Ethereum blockchain, extracting data on lending protocols.
 - Established a comprehensive company infrastructure, either locally or in the cloud, to facilitate a complete software lifecycle from development to CI/CD, showcasing the capability to simulate and deliver various combinations.
 - Created multiple Proofs of Concept (PoCs), including a connection between Injective chain indexers and an agent that integrates data with calls to Allora's decentralized AI, generating reports on potential arbitrage opportunities. Developed as generic code to connect to any blockchain and integrate any AI model.
 - Constructed a toy blockchain as a Cosmos zone, capable of managing Proof of Stake (PoS) and serving foundational building blocks for decentralized finance (DeFi), including decentralized exchanges (DeXs) and lending protocols.
 - At **Innoveo Solution AG**, I contributed to the development of a proprietary product as a partner from its inception. This involved:
 - Initial brainstorming sessions
 - Establishing a suitable infrastructure
 - Creating an agile environment (one of the first companies in Switzerland to do so)
 - Software development
 - Following **Innoveo's** acquisition by **Pactera AG**, I participated in the transition, during which the team expanded from 15 to 45 members within a year. My main responsibilities included:
 - Integrating new developers through remote pair programming
 - Supporting specific applications already in production
 - Planning and developing new features and structural changes in the codebase.
 - At **Swissquant Group**:
 - Rapid integration with comprehensive knowledge of the Software Development Life Cycle (SDLC) and the technologies employed
 - Assisted the team in migrating to Git and ensuring proper usage of related tools
 - Enhanced existing software through refactoring and feature development
 - At **Zurich University**:
 - Conducted a thesis on blockchain-based decentralized finance (DeFi)
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Work Experience

Swissquant Group AG

08/2016 - present

Position: Quant Developer

Main Activities: - Development of software product ImpaQt Plus for wealth management - Java-based development with ActiveMQ and Oracle database - Portfolio constrained optimization techniques - Data-driven application with ETL and REST integrations - Full SDLC knowledge: development, CI, deployment and support

Pactera AG

01/2014 - 07/2016

Position: Senior Software Developer

Main Activities: - Product development (Java-based) - Integration support for remote Budapest team - Core development of insurance industry software - Full software lifecycle participation - Production application support

Innoveo Solution AG

09/2007 - 01/2014

Position: Senior Solution Architect / Partner

Main Activities: - Product development - Core framework development - Feature development - Consultancy for Helvetia Group - Consultancy for AdCubum AG

Ecenter Solution AG, Helvetia Group

03/2007 - 09/2007

Position: Solution Architect

Main Activities: - Consultancy for Helvetia Group

Various Roles

2000 - 2007

Software Development and Education positions

Education

University of Zurich (2019)

CAS Blockchain - Part 1: Blockchain technology (Completed) - Part 2: Blockchain business and economics (Ongoing) - Part 3: Blockchain regulation

and law (Ongoing)

University of Zurich (2014-2016)

DAS Finance - Mathematical Foundations of Risk Management - Finance
Theory for Risk Management - Risk Management Practices - Financial Markets
- Asset Management and Derivatives

Università degli Studi di Milano (1992-2000)

M.Sc. Physics

Certifications and Training

Data Engineering Nanodegree (UDACITY, 2019)

- Data warehouse patterns
- AWS cloud & Redshift
- Apache Cassandra
- Apache Spark (SQL module)
- Apache Airflow (ETL)
- Python

PRM – Professional Risk Management (2016)

- Level 1: Financial Theory
- Level 2: Mathematical Foundations
- Level 3: Risk Management Practices
- Level 4: Case Studies & PRMIA Standards

Big Data (University of California, San Diego - Coursera)

- Introduction to Big Data
- Big Data Modeling and Management Systems
- Big Data Integration and Processing
- Machine Learning with Big Data

Additional Training

- Annual conferences and various training (2007-present)
 - JBoss training (2006)
 - SCJP (JDK 1.4) (2005)
 - SCWCD (J2EE 1.4) (2005)
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Skills and Competences

Technical Skills

- Java J2EE, Web, Webservices, REST
- Spring, Spring MVC, Guice
- ActiveMQ, Hibernate, Docker
- Spark (streaming, SQL, MLlib), Knime
- Database Technologies (IBM UDB, Oracle, MySQL, MS SQL Server, MongoDB)
- Operating Systems: Unix (HP/UX, Linux), Windows
- Version Control: Git, SVN, CVS
- Agile Development (TDD, CI, Scrum)

Domain Knowledge

- Finance and Insurance Industry
- Business & Technology
- Flexible Insurance Modeling
- Solution & Software Architecture
- E-business Consulting

Languages

- Italian (Native)
- English (Fluent)
- German (Upper Intermediate)
- Spanish (Upper Intermediate)