

Olivier BRUCHEZ, Software Engineer / Scala Developer

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Born July 6, 1978 in Geneva
Swiss, single

Professional Experience

- May 2012 - Present **Software engineer / Scala developer at MetaMedia Center, EPFL**
- Working on various projects of the MetaMedia Center (MMC), such as the Montreux Jazz Digital Project (MJDP) (**Scala, Lift**)
- Aug. 2011 - Mar. 2012 **Software engineer / Scala developer at E-mmunizer**
- Developed a highly scalable web platform based on cutting-edge technology (**Scala, Lift, Cassandra, PostgreSQL, Amazon S3, jQuery**)
- Sept. 2009 - Jul. 2011 **Software engineer / consultant at ELCA Informatique**
Mar. 2011 - Jul. 2011
- Maintained and tested an unforgeable code printing framework (embedded part), as well as a layout editor for different printers (**Python, C#, C++**)
- Sept. 2009 - Feb. 2011 (SIX Card Solutions)*
- Developed a web application to allow multiple teams to synchronize their activities during the deployment of a release into the production environment (**Java, GWT**)
 - Debugged and partially rewrote a risk management (fraud detection) module previously developed by an intern (**C++, SQL, large databases**)
 - Developed and maintained various online / high-availability and offline electronic payment applications using Scrum (agile method), UML, and test-driven development (TDD) (**Java, C++, SQL, large databases**)
- Jul. 2008 - Aug. 2009 **Software engineer / consultant (self-employed)**
- Added a REST interface to an already existing web application and developed the corresponding Java client API (**REST, Java, Orbeon Forms, XForms**)
 - Modified several visual elements of the Summary Page of Form Runner in Orbeon Forms (**Orbeon Forms, XForms, CSS, YUI**)
 - Added features to an XForms-based web application for network audit reports management (**Orbeon Forms, XForms, XQuery, XSLT, eXist**)
 - Developed a desktop application to launch E-Prime psychological tests/games for children with test results analysis/upload
- Apr. 2002 - Jun. 2008 **Software engineer at VisioWave / GE Security**
- Developed and maintained the company cross-platform software (core services and SDK) for real-time acquisition, transmission, storage, and retrieval of digital audio/video for security applications. Worked on more than thirty releases, service packs, and hotfixes. Fixed hundreds of customer/QA-reported bugs. More specific tasks:
- Designed and implemented a hardware-agnostic XML-based health monitoring framework (as well as several plugins for motherboards, RAID controllers, etc.)
 - Tested and maintained an H.264 codec (rate control and entropy coding modules)
 - Developed a video/audio rendering component, using pixel shaders for deinterlacing and color conversion, including MPEG-2 PS parsing
 - Designed and implemented a distributed alarm/event management system
 - Developed a timeline component for video/audio storage display/playback (GUI)
 - Maintained a web-based configuration tool (PHP/SQL)
 - Maintained the company continuous integration (CI) build system (PHP)
 - Installed and maintained an internal knowledge base for software engineers (MediaWiki)

Software Skills

Languages	Scala, Java, C++ , JavaScript, Python, C#, PHP, XForms, XQuery, XSLT, Pixel Shader Assembly Language/HLSL
Frameworks	Lift, jQuery, Orbeon Forms, Google App Engine (GAE) / Web Toolkit (GWT), Hibernate, Restlet
Databases	PostgreSQL, Cassandra, MySQL, JPA/JDO
Dev. tools	Git, IntelliJ, Eclipse, SBT, Maven
General	Web development, functional programming (FP), object-oriented programming (OOP), distributed/multithreaded/real-time programming, audio/video

Academic Projects

2001 - 2002	Distributed video archival and streaming system using CD/DVD jukeboxes (C++ , parallel computing , video streaming , 3D , drivers)
2001	Utility for converting between ICC profiles and XML (Java , XML , color management)
2000 - 2001	Exploration of new types of Turing neural networks (C++ , ANN , evolutionary algorithms)
2000 - 2001	Control software for an MC68331-based mobile robot (C , assembly language)
2000	DNA sequence classification using artificial neural networks (Lisp , bioinformatics , ANN)

Other Projects / Personal Projects

2000 - Present	KeithJarrett.org, an unofficial website about jazz pianist Keith Jarrett
2002 - 2010	Database for Civil Protection / Protection of Cultural Property organization
2000	Self-learning Connect 4 software using neural networks and reinforcement learning

Education

1997 - 2002	Master of Science in Computer Science (MS/CS) EPFL, Swiss Federal Institute of Technology, Lausanne, Switzerland Optional courses: artificial intelligence (AI), artificial neural networks (ANN), bioinformatics, computer graphics, document engineering, natural language processing, pattern recognition, virtual environments
1992 - 1997	Scientific Matura Collège de l'Abbaye de Saint-Maurice, Switzerland

Language Skills

French (mother tongue), English (fluent), German (basic knowledge)

Hobbies / Interests

Mountain hiking/biking, skiing, music (jazz and more), reading, blogging, traveling, Getting Things Done (GTD), technology/futurology, philosophy