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| **Marcin Aleksander Nowak** | |
| E-mail | [Marcin.Nowak@sonyx.net](mailto:Marcin.Nowak@sonyx.net) |
| Mobile | +41 76 501 0521 |
| Homepage | <http://resume.marcinnowak.info> |
| Nationality | Polish |
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| **Expertise:** |  |
| Software Architecture | Hoisting, Analysis, Evaluation, Patterns and Styles, ATAM, CBAM, Requirements and Decisions Management, 4+1 Views, ADD, Twin Peaks Model, ISO 42010, |
| Coding | Java, .NET, C/C++/C#, Ruby, Python, R, Groovy, JavaScript, Bash, |
| Toolchain | J2EE, RAML, Docker, Maven, Jenkins, GCP, AWS, SonarQube, VS |
| Software Engineering | TDD, BDD, Code & Process metrics, Static and dynamic verification, CI, |
| Development Process | Agile, RUP, TFS, Scrum, Kanban, |
| Modeling | XML/XSD, JSON/JsonSchema, UML |
| Web | Apache, nginX, Node.JS, Backbone.JS, Marionette, Angular, RoR, Play, |
| Operating Systems | Linux, OSX, Windows, Android, |
| Physics | Laser Optics, Modeling of Physical and Chemical processes, |
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| Certifications | SEI Software Architecture Professional, MS 70-529, MS 70-536,  OMG OECB Fundamental, ISTQB Tester |
| **Professional interests:**  **Academic path:** | Full-stack and back-end solutions, IoT, (micro-) service, cloud, serverless architectures, machine learning, big data |
| Mar. 2009 – Sep. 2014 | Ph.D. - Computer Science at University of Lugano, Switzerland  Collaborative architecture decisions modeling, <https://goo.gl/QqTBqy>  Software Architecture Warehouse <https://goo.gl/2LFSQ0> |
| Oct. 2004 – Jul. 2007 | M.Sc. - Graduate Studies in Physics at University of Hannover, Germany Laser spectroscopy of ultracold SO2 molecules <http://goo.gl/k8bhlt> |
| Sep. 2001 – Jun. 2004 | B.Sc. - Physics at University of Poznań, Poland |
| **Selected Publications:** |  |
| Marcin Nowak, Cesare Pautasso “*Team Situational Awareness and Architectural Decision Making with the Software Architecture Warehouse”* in Proceedings of the European Conference on Software Architecture (ECSA) 2013, Montpellier, France | |
| Marcin Nowak and Cesare Pautasso ”*Collaborative Design with the Software Architecture Warehouse”* At SATURN Conference, Carnegie Mellon, Software Engineering Institute, San Fransisco, CA, 2011 | |
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| **Professional Path:** |  |
| Sept 2018 - now | Sonyx Software (Zurich, Switzerland)  Self-employment – cryptocurrency trading, intelligent home, IoT  (algorithmic trading, private cloud, MQTT, Arduino, ESP8266/32) |
| Nov. 2015 – Sept. 2018 | swissQuant – www.swissquant.com (Zurich, Switzerland)  Maintained and extended java core component for the investment portfolio optimization. Modeled and implemented component’s RESTful API.  (Mixed-Integer Quadratic Problem optimization, BDD, REST, Docker) |
| Nov. 2014 – Nov. 2015 | Roche Diagnostics International – roche.com (Rotkreuz, Switzerland)  Designed of testing architecture, analyzed existing software architecture for the Cobas Liat point of care molecular diagnostics instrument.  (MS VS, BDD, TDD, EA, UI testing, TFS) |
| Mar. 2009 – Sept. 2014 | University of Lugano – www.usi.ch (Lugano, Switzerland)  Research and Teaching assistant for Bachelor (Software Atelier – Web Technologies) and Master (Software Architecture and Design) courses.  Design, coordination, and development of SAW rich-client web application (RoR, Backbone.JS, Marionette) |
| Jan. 2008 – Feb. 2009 | Zühlke – www.zuehlke.com (Hannover, Frankfurt, Vienna)  Supported Software Engineers in software design and development process, architect and analyst, Microsoft .NET technologies specialist.  (.NET, TFS, Biztalk) |
| Aug. 2007 – Dec. 2007 | Sonyx – www.sonyx.net (Bremen, Niedersachsen, Germany)  Self-employed freelancer working with heavy and car industry,  consulting on software architecture analysis, design and implementation.  (C# .NET, C++, Design Patterns) |
| Mar. 2005 – Aug. 2007 | IKN – www.ikn.eu (Neustadt am Rübenberge, Hannover, Germany)  Developed of the XML data input/output system, static code analyst of the clinker processing line (C# .NET, XML, XSLT, XSD) |
| Dec. 2006 | Lafot & UniColor International – www.lafot.com (Bejing, China)  Short time contract on the implementation of windows+linux color management and image processing system. (C++, QT, .NET) |
| Jan. 2006 – Apr. 2006  Jun. 2005 – Aug. 2005 | IKN & PSP – www.pspeng.cz (Prerov, Czech Republic) Refactored and improved of clinker line model (Borland C++, Unix + windows system engineering, wiki and revision control system) |
| Jan. 2000 – Feb. 2005 | Lafot – www.lafot.com (Puszczykowo, Poznan, Poland) |
|  | Medium scale MS VisualStudio .NET (C++) based image processing project manager & co-developer, build and code versioning controller |
|  | Developed embedded QT framework based Linux solution interfacing with a distributed network of microcontrollers, Linux kernel extensions, embedded client-server application development |
| **Language skills:** | |
|  | Polish native  English proficient (C2) German fluent (B2/C1)  Italian basic (B1) |
| **Personal points of interest:** | |
|  | Bitcoin trading, Alpine skiing, mountaineering, snowshoeing, and hiking,  Motorcycle touring, IoT home automation and robotics,  Acrylic painting |