

Maciej Kolosko (www.kolosko.com) ; (+1)-416-859-1740 ; Acton, ON, L7J 3AJ, Canada

Summary of Qualifications:

- Over twelve years of professional software development experience
- Broad and up to date knowledge of modern software development techniques and architectures
- Leader of software engineering teams

Areas of Expertise:

- Architecture design and development of complex software products
- Building sophisticated test and measurement systems
- Multi-threaded software development
- Distributed Sensing
- Software Verification & Validation
- Medical Device Development
- Working with huge data sets (64bit application design)
- New Product Implementation

Key Accomplishments:

- Systems Architect working on BRIMS system for the BRUCE power Non-Destructive Examination system. As the Quality Lead successfully managed the ISO 13485 audit @ Prolucid.
- Worked on several Medical Device Commercialization Projects in both Architect as well as Project Manager positions, both in the EU as well as in Canada
- Designed and developed the software for Silixa's flagship product, the iDAS Sensor which is one of the worlds most advanced fiber optic distributed acoustic sensors.
- Implemented and rolled out a Software Development Process (ISO9001) @ Silixa including design of process flow and installation and configuration of software systems such as Bug Tracking System, Source Code Control that would safeguard the process execution.
- Designed from scratch and rolled out a sophisticated automated test framework(s) for Woodward's PC Service Tools, covering Electrical Control Unit product families that had large variation.

Languages & Frameworks:

- .NET, C#, WCF, WPF
- Java SE, Java EE, Jython
- G(LabVIEW), Actor Framework, NI FPGA

Professional Certifications:

- **Source Code Control:** Git, SVN, Perforce
- **Databases:** SQLite, MS SQL, PL/SQL, MySQL
- **IDEs:** Visual Studio, Eclipse, LabVIEW, NI TestStand, Android Studio
- **Requirements:** Polarion, DOORS

Skills:

- Agile: Scrum
- Project Management
- Technical Team Lead
- Medical Device Development
- Systems Design

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Career Progression:

Senior Product Software Engineer; March 2017 – present

At Advanced Test & Automation (www.advancedta.com) I'm responsible for development of ECTS (Engine Component Test System Platform Software) as well as development of software for sophisticated test stands dedicated to end of line verification of engine components.

Advanced Tester System for Oil Pump Testing for BROSE – joined a project in the final stage before delivery, in order to bring software up to speed. Developed multiple aspects of the system including connectivity with customer's facility management system database, drivers for the S7 plc controlling a gantry system, wrote software to conduct analytics. Test systems to be deployed to Mexico and China.

Budget ~ 2M CAD

ECTS – ownership and development of the roadmap for the ECTS platform.

Software Architect (Contract) March 2017

Short IRAP project in cooperation with Queens University and Laser Depth Dynamics designed and developed a LabVIEW drivers for a prototype infrared camera, as well as a driver to utilize the Device Net protocol for the use by LDD as part of their advanced Laser Welding System.

Systems Architect; August 2013 – February 2017

Prolucid Technologies Inc. (www.prolucid.ca) I held several roles from Project Lead to Architect on multiple projects mostly in the Nuclear Energy field as well as Medical Device space. As well as supporting the site procedures and audits with the ISO 13485 and ISO 62304 standards **Mississauga, ON, Canada**

BRIMS Project(Nuclear Reactor Non-Destructive Testing):

Type: Industrial Instrumentation, CANDU Nuclear Reactor Non-Destructive test system:

Overview: Prolucid has been contracted by CANDU energy to develop software for the BRIMS ANDE. The overall project budget is over 90 Million CAD (<https://www.youtube.com/watch?v=8sjEuznMQ8Q>)

- Developed FPGA code for high speed data acquisition and processing using NI FPGA tool chain.
- As Systems Architect designed overall software architecture for the system
- Tools used, C#, .NET, WCF, NI LabVIEW, NI FPGA, PXIe measurement system, Actor Framework
- The work included building a simulator of the actual acquisition system.
- RS232, MODBUS, Ethernet TCP/IP
- Role held Software Architect, team size 3 to 5 developers.

MyndMove(Functional Muscle Stimulator):

Type: Medical device (<http://www.myndtec.com/myndmove>)

Overview Prolucid has helped MyndTec Inc. commercialize and put to the market a functional muscle stimulator and pass it through Health Canada, we're currently wrapping up a version of the software for FDA approval.

- System comprised of four major software elements, Embedded code running on an ARM7, Tablet Application (HMI), Cloud Database and Website, Cloud Based Remote Update System.
- Tools used: C#, .NET, WCF, NI LabVIEW, MS Azure, ASP .NET, MVC 5., NUNIT
- IEC 62304 & ISO 13485
- Ethernet TCP/IP, custom analog and digital I/O based on ARM7
- Role: Project Manager / Software Architect, Team size 3 to 5 members.
- Overall budget: 500 k./

MDDT Tremortek (Essential and Parkinson's Tremor Detection):

Type: Medical Device, medical trials prototype (<http://mddtinc.com/products/>)

- System comprised of an application designed for data acquisition and performing assessments, Cloud Database and Website
- Tools used: C#, .NET, WCF, WPF, MS Azure, ASP .NET, MVC 5, MATLAB, NUNIT
- IEC 62304 & ISO 13485
- Ethernet TCP/IP

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- Role: Project Manager, Team size 3 to 5 members.
- Overall budget 150 k.

The Canary System (Medical Device)

Type: Medical Device (<http://www.thecanarysystem.com/about.php>)

- System comprised for data acquisition and performing assessments, as well as a cloud database
- Tools used: NI LabVIEW, Java J2EE, Apache.
- IEC 62304 & ISO 13485
- Ethernet TCP/IP, custom analog and digital I/O
- Role: Developer, team size 2.
- Budget 120 k.
- The **Canary System** was one of the first systems that Prolucid has developed a Back End solution for it was Java Based, since this system we've migrated our cloud development from Java to .NET technology stack that is why MyndMove and MDDT were .NET based projects.

Supported prototyping and sales opportunities for various projects:

- Tools Used: NI LabVIEW, NI FPGA, C# .NET.
- SPI, I2C, PXIe, custom analog and digital I/O
- Used Polarion Requirements System to organize and oversee manual testing, JIRA for backlog management, git for source code control

Owner and Software Architect; October 2012 – August 2013

Kolosko Engineering Solutions LTD. (www.kolosko.com) As a contraction I've worked for **Parker Hannifin** on development of a Class IIB medical device for cancer therapy Hemel **Hempstead, UK**

Work on Class IIB medical device for cancer treatment:

Type: Medical device (<http://www.freepatentsonline.com/D746988.html>)

- Worked on a prototype of a medical device, similar in concept build to a dialysis machine
- Tools Used NI LabVIEW, NI FPGA, NI Requirements Gateway, C# .NET, NI Test Stand
- RS232, custom analog and digital I/O.
- IEC 62304 & ISO 13485
- Developed a test station to ensure validate the correctness of blood pump flow as well as provide a test to validate the wear and tear of the tube sets used.
- Role, independent contractor & software architect, team lead of software team of 4 members all contractors.

Staff Software Engineer; Senior Software Engineer June 2010 – October 2012

Silixa (www.silixa.com) I've worked as the Lead Software Engineer on the development of iDAS, a highly-advanced fiber optic acoustic sensor, as well as supported trials and development of several applications of iDAS in the security and seismic fields. I've also participated in preparation of the company's software development process to pass the ISO 9001 audit **London, UK**

iDAS – intelligent Distributed Acoustic Sensor:

Type: Industrial , fibre optics high speed acquisition (<http://silixa.com/technology/idas/>)

- Developed software for high speed data acquisition 200 MB/s of data
- The system design was based on a PXIe industrial computer system, with several sophisticated modules installed Including custom FPGA module for high speed Data Acquisition
- Developed software tools for large dataset viewing and post processing
- Tools used: NI LabVIEW, NI TestStand, C# .NET, SVN
- ISO 9001 certification support on the software side
- Team Lead of team of 5 software engineers working on various iDAS applications, in the area of seismic, security and flow detection

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- Advisory role to the CTO on the strategy of software development, and product realization.

Senior Software Verification & Validation Engineer; Software Verification & Validation Engineer May 2007 – June 2010

Woodward (www.woodward.com) I've lead the software tools and verification teams in our local office, as well as worked on creating automated test frameworks for Woodward's service tool platform Woodward Toolkit. I've also contributed to the EOL testing, and developed internal tools used inside the organization to enhance testing capabilities **Kraków, Poland** I've also had interim team leadership duties of a total of 7 man local Krakow Software V&V and Software Tools teams.

Automated test framework for Woodward Toolkit Service Tools:

Type: Industrial, Engine & Turbine Control systems.

- Woodward toolkit was a generic .NET based service tool used to communicate, monitor and control settings of Woodward controls.
- Developed a framework which automatically took requirements from DOORS, parsed the parameters, and used Toolkit components with the target firmware for a given control in order to ensure that the parameters from the specification
- Developed additional regression tests for the Toolkit service tools and Woodward Toolkit itself
- Tools Used: NUNIT, C# .NET, NI TestStand, SVN, DXL (Doors Scripting language)

Test framework for Java Software tools

Type: Industrial, Engine & Turbine Control systems.

- Before Toolkit many Java tools developed by Woodward were custom per project, and Java based.
- Used Marathon GUI framework to create automated tests for Java based service tools, which interacted with the GUI of the service tool automatically
- Tools Used: Marathon GUI test framework, Python, Java.

Developed tools supporting productivity for End of Line and Software V&V Group:

- As an example developed a server that allowed remote control of Woodward controls with the use of WCF.
- Tools used: NI LabVIEW, C# .NET

Software Development Specialist May 2006 – April 2007

Siemens (www.siemens.com) I've worked on bid preparation and early stages of project analysis for the ESTAT commission in Brussels. I've done proof of concept as well as Java based prototyping **Wrocław, Poland**

Supported bid preparation and prototyped software:

- Supported bid preparation for development of software systems
- Prototyping of software
- Tools used: Java SE, Java EE.

Analyst; Intern July 2004 – April 2006

Accenture (www.accenture.com) from a summer internship to a full-time job, I had a great opportunity to work on one of the largest software overhaul projects for one of the polish Banks. I worked on a large-scale project (more than 90 people) in the technical architecture team dealing with automated deployment of software, as well as development of J2EE web applications **Wrocław and Warsaw, Poland**

Technical Architecture team (devops)

- Developed scripts to automatically create test/development and user acceptance testing environments

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- Developed tools to create builds of web applications automatically using source code
 - Tools used: PL/SQL, Java, VB .NET, Visual Source Safe.
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Education:

Master of Science in Electrical Engineering October 2000 - June 2005

Wrocław Technical University, **Poland**

Professional Certifications:

- **Certified Java Programmer**
- **Certified LabVIEW Architect**
- **Certified LabVIEW Embedded Developer**
- **Certified Scrum Master**

Languages: Polish - native; English – fluent; German – basic