

Matt Kramers

SOFTWARE DEVELOPER · TEAM LEADER

Toronto, ON

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Experience

Focal Healthcare Inc.

Toronto, ON

LEAD SOFTWARE DEVELOPER

Jun. 2014 - PRESENT

- As Focal's first employee, led and made significant contributions to all aspects of software design and development for two flagship medical devices from initial conception through deployment
- Developed, maintained, and supported desktop software (primarily in C#) including:
 - Visualization of DICOM images, human anatomy, and 3D procedure environment (OpenGL)
 - Custom algorithms and interactive tools for performing 3D image reconstruction, image segmentation, mesh generation, and surface registration
 - User interface design and integration (WPF)
 - Automated unit+integration tests (NUnit) and build+installation system (MSBuild, NSIS, CAKE)
- Built, managed, and mentored a team of 7 software developers
- Performed project management throughout all company milestones and managed a Kanban board for the development and quality control teams
- Established and refined internal processes in the areas of software development, quality control, and SDLC
- Implemented and supported all company DevOps and IT infrastructure:
 - Continuous integration: (Jenkins)
 - Source control, issue tracking, and project management (BitBucket, Perforce, JIRA, TRAC)
 - Network infrastructure and resources (VPN, security, DHCP, DNS, domain services, NAS, data backups/recovery, GSuite)
- Practiced design controls and FDA / ISO 13485 / IEC 62304 compliant software development and authored numerous WI/SOP/DHF documents

Robarts Research Institute

London, ON

SUMMER RESEARCH STUDENT

May 2012 - Aug. 2012

- Developed a C# WinForms desktop application for evaluating human performance using a prostate biopsy device
- Acquired user performance data by communicating with multiple electro-mechanical devices using serial communication
- Provided real-time visualization of the devices and virtual targets

Personal Projects

GameBox

🔗 [GITHUB.COM/MKRAMERS/GAMEBOX](https://github.com/mkramers/gamebox)

Apr. 2019 - PRESENT

- A 2D sprite-based game engine written in .NET Core
- Inspired by a love for gaming, graphics+art, and software design patterns

SyncWatcher

🔗 [GITHUB.COM/MKRAMERS/SYNCWATCHER](https://github.com/mkramers/syncwatcher)

Jun. 2018 - PRESENT

- A C# application for performing FTP synchronization, media organization, and media browsing
- Inspired by a desire to enhance knowledge of architectural patterns (MVVM) and passionate digital media tidiness

Education

The University of Western Ontario

London, ON

M.E.SC. IN BIOMEDICAL ENGINEERING

Sept. 2012 - Aug. 2014

- *Thesis:* Evaluating Human Performance for Image-Guided Surgical Tasks
 - Developed a mobile augmented reality application which performed neurosurgical guidance
 - Implemented a human performance evaluation pipeline for various image-guided medical devices
- *Supervisors:* Dr. Aaron Fenster, Dr. Roy Eagleson

The University of Western Ontario

London, ON

B.E.SC. IN ELECTRICAL AND COMPUTER ENGINEERING

Sept. 2007 - Apr. 2012

- *Capstone Project:* Prostate Biopsy Procedure Performance Evaluator and Replay Application

Skills

Development C#, C++, C++/CLI, Python, OpenGL, WPF, NUnit, VTK, SFML, CAKE, NSIS

Tools Jenkins, OpenCover, ReSharper, Git, Bitbucket, JIRA, Perforce, Batch, Bash, Ubuntu, Aseprite, GIMP, DCMTK

Documentation AsciiDoc, L^AT_EX, Markdown, Doxygen, FDA / ISO 13485, IEC 62304