Mark Seufert

www.github.com/MarkSeufert markseufert1@gmail.com www.markseufert.com

SKILLS & QUALIFICATIONS

- **Programming Languages:** fluent in c, c++, c# and Matlab; familiar with Python, Java, and JavaScript
- **IDEs:** 5 years experience with Microsoft Visual Studio; 1 year experience with Eclipse, CodeBlocks, and Android Studio
- **Graphics:** experience with WinForms, WPF, OpenGL, OpenCL, GLFW, Unity3d, and BGI graphics
- **Object Oriented Programming:** intuitive understanding of classes, structs, libraries, templates, and inheritance
- **Data Structures:** capable of implementing arrays, linked-lists, hash tables, trees, and graphs
- **Image Processing:** familiar with topics such as normalization, discrete transforms, and colorspace conversions
- **Version Control:** significant experience using GIT; familiar with SVN
- **Video filming and editing:** experience with GIMP, Adobe Photoshop, Adobe Premiere and FFMpeg
- **Web Development:** set up several people's websites in the past; moderate skills with HTML, CSS, and JavaScript
- **Cryptocurrency Knowledge:** invested in a wide portfolio of cryptocoins which lost all its value :'(

WORK EXPERIENCE

C# Software Developer at Nicoya: **January 2019 - April 2019**

- Worked at a small medical startup to create industry leading Surface Plasmon Resonance technology
- Designed and implemented a .NET WPF project from scratch to display and calculate metrics on data
- Wrote multithreaded software to continuously poll light spectrometer hardware via FTDI USB
- Built projects for various devices and hardware; required code cross platform and bug resilient code

C#/C++ Software Developer at IGNIS Innovation: **May 2018 - August 2018**

- Worked in an agile environment to create LED age correction technology
- Utilized OpenCL and parallel programming in c++ to implement a curve fitting library
- Added features to the software's UI using .NET WinForms
- Refactored codebase into DLLs and created unit tests using the Google Test framework

C++ Software Developer at Lens Immersive: **January 2017 - April 2017, September 2017 - December 2017**

- Worked closely with CEO/CTO to develop image compression software
- Implemented research paper on arithmetic encoding using Matlab to increase the compression ratio by 5%
- Responsible for converting the codebase from Matlab to c++ in a short timeframe
- Optimized algorithms through Visual Studios profiler; resulted in a runtime speedup by a factor of 50

Math Tutor**: September 2015 - February 2016**

- Taught a grade 10 student the basics on linear, quadratic, and exponential relations
- Required patience and interpersonal skills to convey the information properly

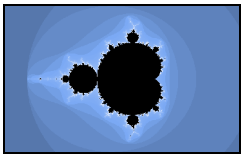
INDEPENDENT PROJECTS

Tribreak: **March 2019**

- Developed an android game using Unity3d in c# that requires the player to strategically break triangles
- Incorporated knowledge from topics such as graph theory, trigonometry, and position interpolation
- Available on the Google Play store at https://play.google.com/store/apps/details?id=com.MWAS.TribreakV2

Mandelbrot Viewer: **June 2018**

- Programmed an interactive fractal viewer in c++ using the GLFW library for OpenGL
- Required highly optimized algorithms to generate the fractal in the shortest time frame
- Used math concepts such as complex number arithmetic and limit theory

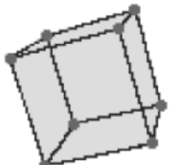


Spherical Navigation: **October 2017**

- Created a graphical spherical navigation program in Unity3d using JavaScript and c#
- Determines the shortest distance and trajectory between two user-selected points on the earth
- Involves planar and spherical trigonometric calculations

Rotating Regular Solids: **September 2016**

- Created an application to display rotating 3d shapes using c++ and the BGI graphics library
- Used rotation matrices to rotate the points and perspective mapping to display the shapes on the screen
- Wrote a double buffering function to fix screen stuttering/tearing



Keywords i have:

- MATLAB
- Research Papers
- Software
- C++
- Optimized
- Visual Studio
- FFMpeg
- OpenCV
- Agile
- .NET WinForms
- DLLs
- Unit tests
- .NET WPF
- USB
- hardware