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Eric Matthew Knapik

OBJECTIVE

Seeking full time employment starting Summer 2017. Interested in computer graphics, engine programming, back-end programming/services and internal tooling.

WORK EXPERIENCE

Software Engineer Co-op **Apple** **June 2016 - Current**
- Improved and refactored an internal cloudkit request pipeline.

Software Engineer Co-op **Exablox** **June 2015 - Dec 2015**
- Created a natural language processing program for the detection and documentation of copyright notices within software packages and their dependencies.
- Put into production a hard drive health monitoring system.

Computer Graphics Course Grader **Rochester Institute of Technology** **Jan 2016 - May 2016**
- Graded course covering the origins and basics of rasterized graphics from line drawing to shader based OpenGL.

Supplemental Instruction Leader **Rochester Institute of Technology** **Aug 2014 - Dec 2014**
- Aided students in understanding course material and improving study skills by leading two study sessions for introductory CS classes

LANGUAGES AND TECHNOLOGIES

Languages: C/C++, Java, GLSL, Python, Go, C#
Tools/Frameworks: OpenGL, Ray Tracing, Computer Graphics, Linux (Ubuntu), macOS, Vim, Bash, Git, GitHub, SVN
Databases: MySQL, PostgreSQL

EDUCATION

Rochester Institute of Technology **B.S. Computer Science**

Relevant Coursework: Software Engineering, Computer Graphics, Global Illumination, Computational Geometry, Advanced Linear Algebra, Multivariable and Vector Calculus, Concepts of Computer Systems, Analysis of Algorithms, Mechanics of Programming, Professional Communications, Intro to Computer Science Theory, Concepts of Parallel and Distributed Systems, Programming Language Concepts.

GPA: 3.7/4.0 **Minor:** Mathematics **Concentration:** Graphics **Expected Graduation:** May 2017

PROJECTS

Foveal Renderer *(C++, GLSL)* **Personal** **Current**
- Implementation of a combined deferred and forward rendering pipeline. With investigation into the viability for using eye tracking as an optimization path.

Fluid Simulation *(C++, GLSL)* **School Project** **Spring 2016**
- Following research papers on smooth fluid hydrodynamics, implemented smoothing kernels for the creation of a real time fluid simulation.

Copyright Notice Detection *(Go, shell, python)* **Exablox** **Summer 2015**
- Using NLP techniques from research papers applied the viterbi algorithm for the identification of copyright notices within source code files.
- A simple pipeline was created for the identification, extraction and posting of notices found.

Lighthouse Ray Tracer *(GLSL)* **Personal Project** **Summer 2015**
- Implemented a real time ray tracer running on the gpu with OpenGL fragment shaders. A live demo can be found at: https://www.shadertoy.com/view/MISXRz

EXTRACURRICULAR

Computer Science House **Rochester Institute of Technology** **Fall 2013 - Current**
- Applied technical skills as a member of CSH, a Special Interest House at RIT with a server room, wood shop, and several common rooms with emphasis on hands-on learning
- Actively improved technical skills by completing technical projects and learning from older members and alumni

Eagle Scout **Member of the Order of the arrow**
- Created a sensory trail at a camp for the visually impaired