Erick Dransch

4B Computer Science - University of Waterloo

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www.github.com/EkkiD

About

Future Computer Science grad looking for a backend or low-level Software Developer position at a great company that is having a real impact.

Work Experience

Walk Score
Software Developer, Seattle, 09/2012 – 12/2012

- **Technologies:** Python, SQLAlchemy, Flask, JavaScript, jQuery mobile, Git
- Extended and refactored back-end data imports to improve data quality, storage model, reduce duplication, and to ensure scalability.
- Full stack implementation of mobile website; numerous features on desktop website.
- Communicated directly with customers to implement features to specification.

Mozilla Corporation
Software Developer: Release Engineering, Toronto, 01/2012 – 04/2012

- **Technologies:** Python, Flask, SqlAlchemy, jQuery, Git, Mercurial
- Excelled as a member of a globally distributed team, automating and simplifying the release process for Mozilla's Firefox and Thunderbird.
- Designed and Implemented the web-based interface for Mozilla's new update server.
- Each commit underwent rigorous code review and contained thorough unit tests for modified or added code.
- Extended signing infrastructure to automate digital signing of builds on OSX and facilitate the transition to OSX 10.8 for Firefox.

Side Effects Software
3D Software Developer, Toronto, 05/2011 – 08/2011

- **Technologies:** C++, SVN
- Thrived as part of the Research and Development team working on the flagship 3D Modelling product: Houdini.
- Created a regular expression generator to match given strings with a human readable expression, integrated a regular expression library.
- Collaborated with teammates to design and implement a performance monitor.
- Implemented low level hooks to monitor work done by individual threads, stored performance data for efficient retrieval and generated and rendered visualizations of performance information.

Behaviour Interactive (previously Artificial Mind and Movement)
Game Developer, Montreal, 01/2010 – 04/2010 and 09/2010 – 12/2010

- **Technologies:** C++, LUA, PS3 and X360 SDKs and APIs, Perforce
- Debugged and redesigned features in the stabilization stage of the video game NaughtyBear within weekly product submission deadlines.
- Refactored and improved existing code and designed and implemented new features in early development stages.
- Corrected and improved highly critical issues in many aspects of the game, notably the HUD, audio support, menu flow, and gameplay.
- Interacted with audio and game designers to arrive at the best solution within constraints such as time available, existing code and specification.

University of Waterloo
Calculus I and II Tutor, Waterloo, 09/2009 – 12/2009 ; 01/2011 – 04/2011 and 09/2011 – 12/2011

- Exercised strong communication skills teaching and explaining broad concepts and specific problems during weekly hours in Tutoring Centre.

Education

Candidate for Bachelor of Mathematics, Computer Science, Co-op Program.
University of Waterloo, Waterloo, ON, 09/2008-present

Interesting Projects
3D Maze Game, Introduction to Computer Graphics, 05/2012

- Animated 2.5D maze generator and game using OpenGL and gtkmm.

Joos Compiler, Compiler Construction, 01/2013 – 04/2013

- Architected and Implemented a compiler from a large subset of Java to x86 assembly with a team of 3 classmates.

Operating System, Operating Systems, 01/2011 – 04/2011
- Designed and implemented operating system features including forking processes, file descriptor management, memory management, TLB, and page fetching on the on MIPS architecture with a small team.

Buzzwords

- **Languages:** C++, Python, Javascript, C
- **Version Control:** Git, Mercurial, SVN, CVS, Perforce
- **Libraries and APIs:** OpenGL, PS3 & X360 SDKs and APIs, JQuery Mobile, SQLAlchemy, gtkmm
- **Platforms:** Linux, OS X, Windows

Projects and Interests

Research Assistant - Human Clustering - *University of Waterloo*, Waterloo, 05/2012 – 08/2012
- Analyzed human clustering of weighted data sets in comparison with the results of common clustering algorithms.
- Developed a set of stimulus data sets with quality criteria and experimental software to conduct the study.

Maze Generator and Visualizer
- Visualizer for a variety of Maze generating and solving algorithms, implemented using Javascript and HTML Canvas.
- Demo available at www.erickdransch.com/maze and source at www.github.com/EkkiD.

Random Hacks of Kindness, Toronto, Ontario, 06/2011
- Global Humanitarian Free Open Source Hackathon. (www.rhok.org)
- Tackled the problem of sending SMS/email/Twitter messages without network or cell connectivity.
- Worked with a team in Toronto in collaboration with a team from Atlanta, winning first place at both locations.