

PAUL SAWAYA

9 LYN LN. • CALVERTON, NY 11933 • PAS09@HAMPSHIRE.EDU • (631) 387-2986

EDUCATION

Bachelor of Arts Hampshire College

Expected December 2011
Amherst, MA

- **Concentration:** Computer Science and Artificial Intelligence
- **Relevant Coursework:** Algorithms, Animating Fast (possible techniques and algorithms to speed up 3D animation, in Maya), Applied Algorithms, Artificial Intelligence, Computer Graphics (built a ray tracer), Computer Systems I & II, Computer Vision and Image Processing, Combinatoric Structures (basics of discrete math), Computability and Intractability, Data Structures, Introductory Applied Machine Learning, Linear Algebra, Programming for the Interactive Arts (digital art, data visualization, and graphics with OpenGL), Research in Artificial Intelligence, Unconventional Computing
- Some classes taken at Amherst College, Boston University, Edinburgh University, and Smith College.

WORK EXPERIENCE

WebKit Software Engineer, Intern Apple Inc.

June 2010 – September 2010
Cupertino, CA

- Worked with Apple's web group, on the Safari/WebKit rendering team to improve the implementation of a browser embedded 3D graphics API, WebGL.
- Worked to integrate Google's ANGLE shader compiler into WebKit.
- Had patches accepted to WebKit, and submitted patches (still in review) to the ANGLE project.
- Began work on bringing WebGL support to the Safari browser on Windows.

Web Software Engineer, Intern Justin.tv

May 2009 – August 2009
San Francisco, CA

- Participated in the development of a live video API, which allows for the integration of streaming video into applications.
- Wrote back end code in Ruby, and built out example API applications in PHP and Python.
- Created the entire Broadcaster API in HaXe, including Flash components for broadcasting live video.
- Developed features for improving the internal git-based code deployment system, most notably one that allows multiple code pushes simultaneously.
- Developed the Justin.tv Facebook application, Live, which allows live video broadcasting inside of Facebook.

Financial Software Developer, Intern Bloomberg L.P.

May 2008 – August 2008
New York, NY

- Developed a financial services application, XDSH (or FX Dashboard), which allows foreign exchange traders working in the Bloomberg Terminal to create, store, and compare user-definable metrics on different foreign currencies.
- Programmed a Unix service in C++ using Bloomberg's proprietary tools and APIs, as well as developed an interface in Javascript.
- Resulted in a successful and widely used application covered in major financial press channels, including [Reuters](#) and [Forbes](#).

NOTABLE ACADEMIC/PERSONAL PROJECTS

sokobanJS (Personal Project)

July 2010 – Ongoing

- Web based version of the puzzle game Sokoban using JavaScript and HTML5.
- Features hundreds of levels, a solution viewer, and has had over 2,000 players in the past month.
- <http://www.sokobanjs.com>

PAUL SAWAYA

9 LYN LN. • CALVERTON, NY 11933 • PAS09@HAMPSHIRE.EDU • (631) 387-2986

Distributed PushGP in JavaScript (CS230, Genetic Programming) February 2010 – May 2010

- Collaborated with another student to create a client side genetic programming system in the PushGP language.
- Developed a server web application to handle distributed genetic programming jobs asynchronously using Python and Tornado.
 - <https://github.com/ColinRoache/dPGP.js>

Cellular Automata Simulator (CS303, Unconventional Computing) February 2009 – May 2009

- Worked closely with another student to develop an extendable simulator in Python of cellular automata.
- Developed an application that supports both traditional Wolfram cellular automata and a special network simulation CA model.
 - <http://code.google.com/p/cs303-sim/>

New LITE (Independent Study)

September 2008 – January 2008

- Collaborated with a Physics and Astronomy professor to create a series of Flash applets that demonstrate visual effects and allow users to experiment with the factors that create them.
 - <http://lite.bu.edu/new-lite>

Jukebox (Personal Project)

July 2007 – December 2007

- Created a customizable music player Facebook application resulting in 49,000+ active users with over 1,000,000 song plays, based on a database of 30,000 songs as of July, 2009.
 - <http://www.facebook.com/apps/application.php?id=2343189770>

TECHNICAL SKILLS

- **Languages:** C/C++, Erlang, haXe, Java, JavaScript, MATLAB, Python
- **Domain Experience:** Coursework in Artificial Intelligence (applied machine learning and data mining, genetic programming) and Computer Graphics/Vision
- **Web:** HTML5 technologies, frameworks (Tornado, Django, Ruby on Rails), relational databases (MySQL), document databases (CouchDB), Comet (Erlang, node.js)

REFERENCES

- **Lee Spector** at Hampshire College, lspector@hampshire.edu