Alex Limpaecher

Phone: 978-771-0987 • E-Mail: alimpaecher@gmail.com • http://www.cs.cmu.edu/~alimpaec/

Education

Carnegie Mellon University – PhD Student, Computer Science **Sep 2010 – May 2013**

Focus: Crowdsourcing and Gamification Advisor: Adrien Treuille

Classes of Interest: Game Design, Computational Photography, Animation of Natural Phenomenon, Graduate Machine Learning, Graduate Computer Algorithms, Graduate Computer Networks, Optimizing Compilers, Graduate Programming Languages, Computational Molecular Biology and Genomics

UC Berkeley – Visiting Scholar, Computer Science **Jan 2012 – Jan 2013**

Princeton University – BA, Computer Science - Graduated with Honors **June 2008**

Phillips Academy Andover – Graduated Cum Laude **June 2004**

Work Experience

Microsoft Research – Research Intern **Summer 2011**
I worked together with Microsoft Researchers to create a prototype of DrawAFriend originally using Silverlight and Windows Azure. I continued this work at Carnegie Mellon University. See Projects for more information.

Microsoft Research – Researcher Intern **Summer 2010**
I collaborated with Microsoft Researchers and Bing Maps to create a geo-location based side-scrolling game called StreetHunt. See Projects for more information.

Microsoft, Office Graphics – Software Developer **Sep 2008 – Sep 2009**
I integrated Office Graphics Engine with the Microsoft Excel's C++ codebase.

Microsoft, Office User Experience – Software Developer Intern **Summer 2007**
I designed, programmed, and refactored the File New Dialog for Word, Power Point, and Excel.
I designed and programmed the BreadCrumb Navigation Bar for the File New Dialog in C++.

Princeton Summer Theater '06 – Executive Producer, Business Manager **Jan 2006 – Dec 2006**
I budgeted and managed all financials and expenditures of the most profitable PST season to date.
I selected the season's plays, hired actors & directors, and coordinated 20+ paid employees

Projects

DrawAFriend – Lead Game Designer and Developer **June 2011 – Present**

Carnegie Mellon University and Microsoft Research

DrawAFriend is an iOS asynchronous turn-based social drawing and guessing game where players draw their Facebook friends and celebrities. It also doubles as a crowdsourcing research project, aimed at developing tools to help players draw better.

- Built for iOS using: Objective-C, Core Graphics, Core Data
- SDKs: Facebook SDK, Parse backend, ChartBoost SDK, Flurry SDK, TestFlight SDK
- Data-driven Auto-Drawing Algorithm developed with Python and Matlab, programmed in Objective-C
- I designed all the game mechanics and interfaces of DrawAFriend, using elance.com for final art assets.

http://youtu.be/PDUUC_yuz2g *https://itunes.apple.com/us/app/drawafriend/id577654716*

DrugDiscovery – Lead Game Designer and Developer **Jan 2011 – May 2011**

Carnegie Mellon University

DrugDiscovery is a citizen-science game prototype for the iPhone. Players compare and contrast different small drug molecules, aided by dynamic alignment algorithms visually represented in the game.

- Built for iOS using: Objective-C, Core Graphics, CoreData, OpenGL ES, Twitter SDK

http://youtu.be/Tkqz7pb9e0k *https://itunes.apple.com/us/app/ligand-matching/id432757485*

eteRNA – Game Designer **Sep 2010 – May 2011**

Carnegie Mellon University

eteRNA is a citizen-science puzzle game where players design RNA molecules. I worked on the meta-mechanics of the game. *eterna.cmu.edu*

StreetHunt – Lead Game Designer and Developer **June 2010 – Sep 2010**

Microsoft Research

StreetHunt is an augmented reality side-scroller game, where you use your iPhone to chase an alien around Seattle. The game worked by interfacing Bing Maps Street Side data with player's geo-location data. It turned out to be somewhat dangerous in that it had no concept of traffic laws, and thus it was only released internally within Microsoft. *https://vimeo.com/14075315*

- Built for iOS using: Objective-C, Core Graphics, Core Data, Core Location, OpenGL ES and Bing Street Side Data

Birdies4Books – Co-Founder, Lead Designer and Developer **December 2009**

Birdies4Books was a non-profit that I cofounded with a member of the LPGA Futures Tour. It raised over $5K for children's' education in Africa.

- Built using: Django/Python, HTML, Javascript, CSS, and PayPal SDK

Publications and Patents

Real-time Drawing Assistance through Crowdsourcing.
A. Limpaecher, N. Feltman, M. Cohen, A. Treuille
Pending Publication 2013

Where Do People Draw Lines?
F. Cole, A. Golovinskiy, A. Limpaecher, H. Stoddart Barros, A. Finkelstein, T. Funkhouser, S. Rusinkiewicz.
Communications of the ACM 55(1): 107-115, January 2012.
and ACM Transactions on Graphics (Proc. SIGGRAPH) 27(3), August 2008

Method and System for Delivering a Controlled Voltage.
R. Limpaecher, A. Limpaecher
US Patent # 8,000,118. 2012

Awards

National Science Foundation Fellowship 2010
Randy Pausch Memorial Fellowship for Computer Science and Fine Arts 2010
Outstanding Computer Science Senior Thesis Prize, Princeton 2008

Skills

- Programming Languages: Objective-C, C++, C, C#, Python, Javascript, Java, Matlab
- Notable API Experience: Facebook, Paypal
- Machine Learning: Weka, R
- Front-End Development: iOS, Silverlight, HTML, CSS
- Backend Programming: Django, Pinax, Windows Azure, Parse
- Fluent German Speaker

Miscellaneous

Co-writer and Co-Actor for MSN's "I'd See It If" Webseries. 500,000+ Views *http://tinyurl.com/b4ztwa3*
Professional Improvisational Theatre (9 Years), Violinist (20 Years), Actor and Director