

# Jack Huang

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jack-huang.com  
github.com/lanjian

## SKILLS SUMMARY

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- Excellent understanding of fundamental programming concepts including OOP, functional programming, and software design patterns obtained through school and self-study
- Experienced with building web applications and Android applications
- Familiar with game development; complemented by strong background in fine arts
- Demonstrated creativity and skill in visual arts through personal artworks
- Strong problem solving skills; demonstrated by math and programming contest results
- Good communication skills; Fluent in Chinese

## COMPUTER PROFICIENCY

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**Languages:** JavaScript, C++, C, Java, Haskell, Python, Ruby, Scheme, ActionScript, Scala, VB, HTML, CSS, MEL

**Technologies/Tools:** OpenGL, WebGL, Vim, Git, SVN, Perforce, Make, Bash, Batch, SSIS, JSP

**Frameworks/Libraries:** jQuery, Node.js, Three.js, Closure, Rails, GWT, Swing, Facebook API

**Platforms:** Linux, Windows, OS X, Android, iOS

**Databases:** MongoDB, SQL, Redis

**Applications:** Eclipse, Visual Studio, MS SQL Server, Photoshop, Illustrator, Flash, Autodesk Maya

- Knowledge of 3D graphics concepts and technologies
- Familiar with multithreading and concurrency

## WORK EXPERIENCE

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### Backend Software Engineer

SlideShare/LinkedIn

San Francisco, CA

July. 2013 - Present

- Implemented scalable system that is responsible for detecting the language of all the slideshows uploaded through SlideShare
- Worked on systems that drastically reduced spam and duplicate slideshows and improved SlideShare's overall content quality
- **Technologies Used:** Ruby, Rails, Puppet, EC2

### Software Engineer

Side Effects Software Inc.

Toronto, ON

Sept. 2012 - Dec. 2012

- Actively involved in all aspects of a project that allows leading 3D animation package Houdini to be embedded into other applications
- Created a product that, by integrating smart digital assets from Houdini-powered website Orbolt.com with other 3D animation packages, expands the user base and creates powerful new workflows for artists
- **Technologies Used:** C++, Houdini, Vim, Make, SVN

### Accessibility Engineer

Google

Mountain View, CA

May. 2012 - Aug. 2012

- Worked on video closed captioning as a member of the video accessibility team
- Launched user captions customization features on Youtube that enables users to customize caption display styles in support of Communications and Video Accessibility Act technical requirements
- Implemented new rendering capabilities to allow captions in CEA-708 format to be displayed on Youtube
- **Technologies Used:** JavaScript, CSS, HTML, Python, Spitfire(Python template language), Closure

### Platform and Game Engineer

Bioware San Francisco

Redwood Shores, CA

Sept. 2011 - Dec. 2011

- Wrote, maintained, and deployed production level code for games with over 100,000 daily users
- Re-designed and implemented a new gifting system using the new Facebook JavaScript API for the popular social game Dragon Age Legends

- Developed in-game store and integrated it with in-house platform services for an unannounced core social game
- **Technologies Used:** Java, ActionScript, JavaScript, CSS, HTML, GWT, Ruby, Rails, MongoDB, Facebook API, Adobe Flash Builder, Git

## Software Developer

Autodesk Media & Entertainment

Montreal, QC

Jan. 2011 - Apr. 2011

- Worked in a small startup team of 3 developers and contributed significantly to all aspects of the Distributed Simulation project, including design, development, documentation, and quality assurance
- Researched and implemented solutions, through successively-refined prototypes, that would empower artists to produce results more quickly when working with 3D dynamics simulations in Autodesk 3ds Max, Maya, or Softimage
- Designed and implemented a Particle Previewer web application using WebGL that displays particle simulation results
- Adapted quickly to an agile, iterative development process
- **Technologies Used:** Python, MEL, C++, Scala, WebGL, Visual Studio, Maya, 3ds Max, Softimage, Perforce

## Java Developer

TD Securities

Toronto, ON

May 2010 - Aug. 2010

- Responsible for development and support of TD Prime Brokerage website and service
- Learned database technologies through database migration
- Developed various features such as export reports for clients and widgets for the website according to business requirements using a combination of Java EE, SQL, and VB.NET technologies
- Quickly responded to changing client requirements
- **Technologies Used:** Java EE, JSP, VB, MS SQL Server, SSIS

# PROJECTS

## Coffee2D Game Engine

Personal, Aug. 2012

- 2D game engine for HTML5 canvas written in CoffeeScript that leverages features such as classes to better integrate with web games written in CoffeeScript
- Designed to be light-weight and easy to use; includes features such as sprites, event handling, and scene graphs.
- Developed a multiplayer game using the engine at LinkedIn HackDay; source code is available at [github.com/lanjian/gamehack](https://github.com/lanjian/gamehack)

## Surreal (Graphics Art Project)

Computer Graphics, Apr. 2012

- Interactive world inspired by proto-surrealist paintings of Giorgio De Chirico and Yves Tanguy
- Players can walk around in a vast procedurally generated world with an unsettling yet strangely serene atmosphere
- Implemented shadows using shadow maps and a skydome with a day-night cycle to give the world a dynamic feel
- Other features include a particle system and 3D collisions

## Ray Tracer

Computer Graphics, Mar. 2012

- Created a ray tracer in C++ from scratch
- Able to render spheres, cubes, and polygonal meshes
- Features include phong lighting, hard shadows, mirror reflections, and linear fog

## HTML5 Multiplayer Tetris

Personal, Dec. 2011

- Developed a Tetris clone using HTML5 technologies and CoffeeScript
- Currently developing multiplayer head-to-head gameplay over the web with Node.js

## Android MikroCalendar

User Interfaces, Jul. 2011

- Built the Android user interface for a microblogging system for events

## OS/161 Operating System

Operating Systems, Dec. 2010

- Worked in a team to develop an operating system built on top of OS/161
- Requirements included implementing synchronization primitives, system calls, and a memory management system

# EDUCATION

Candidate for Bachelor of Computer Science, Fine Arts Minor

University of Waterloo

Waterloo, ON

Sept. 2008 - Apr. 2013 (expected)

- Dean's Honours List 4 times
- **Relevant courses:** Computer Graphics, Artificial Intelligence, User Interfaces, Operating Systems

## AWARDS

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- Nortel Networks Undergraduate Scholarship, Nortel Networks, Sept. 2008
- President's Scholarship, University of Waterloo, Richmond Hill, ON, Sept. 2008
- Top 2% in 2008 Euclid Contest/Student Honour Roll, University of Waterloo, Richmond Hill, ON, Apr. 2008
- 3rd Place Team in Boardwide Educational Computing Organization of Ontario (ECOO) Programming Contest, ECOO, York University, ON, Apr. 2008

## ACTIVITIES & INTERESTS

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### **VeloCity Mobile + Media Incubator - Member**

University of Waterloo

Waterloo, ON

Jan. 2012 - Apr. 2012

### **Ping Pong Club - Member**

University of Waterloo

Waterloo, ON

Jan. 2009 - Present

### **Intramurals Soccer - Player**

University of Waterloo

Waterloo, ON

May 2011 - Aug. 2011

Enjoys ping pong, soccer, video games, drawing, painting, and photography