

# Li Quan Khoo

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 <a href="http://lqkhoo.com">http://lqkhoo.com</a>	 <a href="https://github.com/lqkhoo">https://github.com/lqkhoo</a>
 <a href="http://www.linkedin.com/pub/li-quan-khoo/89/a27/8aa">http://www.linkedin.com/pub/li-quan-khoo/89/a27/8aa</a>	

## Experience

### Research Intern

June 2014 - August 2014

#### Microsoft Research Cambridge

8-week research internship through the Bright Minds Intern Competition programme for undergraduates, in the Machine Learning and Perception research group.

I worked on Project SmartFence - an application of machine learning on Bing data for personalized web access control. Users block and allow the sites they know and SmartFence infers the suitability of the rest of the web. Delivered a concept prototype for the OneWeek company-wide hackathon. Currently working on first-name publication.

Project supervisors: [Pushmeet Kohli](#), [Yoram Bachrach](#) | Project members: [Ulrich Paquet](#), [Filip Radlinski](#)

### Software Developer

June 2013 - 2014

#### Unientry.Ltd

Delivered a pilot site for sixth form students and their teachers/mentors to find the right university for them. The platform publishes and filters information from the Higher Education Statistics Agency and gives recommendations based on students' perceived ability from their registered information and grades.

Scope: ~3 months + support | Team size: 3 | URL: <http://www.unientry.org>

### Research Project: Task identification in search engine query logs

Jan 2014 - Apr 2014

#### UCL

Research on methods to semantically group user intent in search engine queries, using the semantic web. For instance, the search "hotels in Hawaii" would map the intent (finding out about) "hotels in" to the class <place>. We can then query these hierarchical classes to find tasks users commonly associate with them. This project was awarded best research work / presentation amongst our year.

Scope: ~3 months lit review, ~3 months research | Team size: 1-4

Report: [http://lqkhoo.com/wiki/index.php/File:Task\\_Identification\\_Using\\_Search\\_Engine\\_Query\\_Logs\\_-\\_Report.pdf](http://lqkhoo.com/wiki/index.php/File:Task_Identification_Using_Search_Engine_Query_Logs_-_Report.pdf)

### SynthJS - Music made quick

Dec 2013 - present

An experiment in music synthesis and representation using HTML5-based technologies and an exercise in UI design.

I intended to turn it into a JavaScript application to let people synthesize music quickly with little to no musical knowledge required - and then transform their creation into a personalized rhythm game. Progress is currently halted due to UI scaling performance issues.

Site: <http://lqkhoo.com/synthjs> | Dev diary: <http://lqkhoo.com/wiki/index.php/Dev.SynthJS> | Github: <https://github.com/lqkhoo/SynthJS>

### Project: RoboHome

Sep 2012 - May 2013

#### UCL

To develop a home automation platform capable of controlling devices locally, as well as remote surveillance. Platform is capable of controlling Arduino, Gadgeteer, and Wiimo (Belkin) devices, and has limited voice recognition functions. Remote component is hosted on Azure, local server is a Raspberry Pi running ArchLinux, which our Flask-based Python backend runs on.

Scope: ~9 months | Team size: 5 | Project site: [http://comp2013group7.wikia.com/wiki/Comp2013group7\\_Wiki](http://comp2013group7.wikia.com/wiki/Comp2013group7_Wiki)

### JP Morgan Spring Week 2013

Apr 2013

To implement a performant volatility calculator for a stream of options prices (to estimate the inverse of the Black-Scholes algorithm).

Implementation was in Java, core algorithm is a simple Newton-Raphson iterator. Team awarded second best for code performance and code review, and best for presentation.

Scope: ~8 hours | Team size: 4

### JP Morgan Code for Good Challenge 2012

Nov 2012

Code jam to develop a clip art application to raise awareness about nature in cities. Final application uses HTML5 canvas (Kinetic.js) with a PHP backend for uploads.

Scope: 48 hours | Team size: 4 | Source: <https://github.com/horaceli/naturegram>

## Robot Race 2012

### UCL Computer Science

To program a maze-solving robot in C. Final algorithm is based on a wall-follower. Team placed 10th out of 30.

Scope: ~3 months | Team size: 2

## Project: Android App 2012

### UCL Computer Science

To develop an Android app for the Restless Beings charity to conduct field studies on children in poorly-developed countries.

Scope: ~3 months | Team size: 2

## Public wiki administration and community management Feb 2010 - present

Wiki administrator / bureaucrat for kirby.wikia.com. I am responsible for implementing, maintaining, and modifying the custom theme, templates, scripts, and the custom AJAX/MediaWiki player supporting the Youtube API for site-wide soundtrack documentation. Where necessary, I offer guidance to other users and mediate discussions on technical and site policy-related matters.

Scope: ~4years, ongoing | Team size: N/A | URL: <http://kirby.wikia.com>

## Education

### University College London 2011 - present

#### MEng Computer Science, First class (expected, 2015)

Current institution of study.

### Hokkaido Japanese Language School 2014

#### Japanese language

Month-long intensive course with home stay in Sapporo, Japan, to supplement my self study.

### Imperial College London 2009 - 2011

#### MBBS Medicine

Withdrew during second year to transition to computer science. No credits transferable.

### Concord College, Shrewsbury 2008 - 2009

#### A levels (Pre-A\*)

AAAAb (Biology, Chemistry, Physics, Mathematics, AS English literature, AS Music)

- Outstanding Chemistry Student of the Year 2008
- Outstanding Music Student of the Year 2008
- Hovercraft, solar buggy races participant

## Skills and interests

C#   Java   Python   ASP.NET   HTML   CSS3   JavaScript   TypeScript   jQuery   Backbone.js

Knockout.js   SQL   MediaWiki

### Interests

AI   Machine learning   Natural language processing   Game theory   Distributed systems   UI/UX   Design patterns

Japanese language   Social psychology   Piano   Erhu

### Spoken languages

English   Mandarin   Malay

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