






Li Quan Khoo

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Experience

Research Intern

June 2014 - August 2014

Microsoft Research Cambridge

8-week research internship through the Bright Minds Intern Competition programme for undergraduates.

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. I delivered a working concept prototype for company-wide hackathon. Currently working on publication.

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

Software Developer

June 2013 - 2014

Unientry.Ltd

To deliver 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

To find methods of semantic aggregation of user searches from search engine logs. This ties related searches to a hierarchy of information "classes". For instance, the search "map of Hawaii" would yield a record of "map of" mapping to the class <place>, and querying this class gives the most common tasks users associate with places, where specificity is governed via subclasses, for instance, <cities>, or <capitals>. The research is successful for 3 months' work, and was awarded best research work / presentation amongst our year.

Scope: 3 months | Team size: 1-4

Own Project: SynthJS - Music made quick (pre-alpha)

Dec 2013 - present

To develop a JavaScript-based music sequencer usable by people with little to no musical knowledge, and then converting the music into a personalized rhythm game. Right now, the project is in its beginning stages, so only the sequencer is currently available.

Project is currently on hiatus due to other priorities.

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

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. My technical responsibilities include maintaining and implementing the custom theme, which I have overhauled from Wikia's default over several months, the templates in use, and the custom AJAX script + template wrapper used to pull soundtrack playlists off Youtube, to display them alongside documentation within a custom player.

Community management involves page patrols, user rights and site policy management, handling new announcements from Nintendo, and liaising with Wikia regarding updates and MediaWiki plugins.

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.

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*)

AAAAab (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

Java

Python

C#

ASP.NET

HTML

CSS3

JavaScript

jQuery

Backbone.js

SQL

MediaWiki

Interests

Design patterns

Infosec

Distributed systems

Reliability

Usability

UI/UX

Accessibility

Military strategy

Japanese language

Piano

Erhu

Spoken languages

English

Mandarin

Malay

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