





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, 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 Computer Science

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 | Team size: 1-4

Report: 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 Computer Science

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

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 for kirby.wikia.com. I am responsible for implementing and maintaining templates, scripts, and the custom AJAX/MediaWiki Youtube player 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.

- 3rd Year Best Research Project and Presentation

Hokkaido Japanese Language School

2014

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.

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

High school: SMJK Jit Sin (Malaysia)

- Instructor / lead player for bowed string instruments in a semi-professional Chinese orchestra. We perform and compete internationally - in Malaysia, Beijing, Hong Kong, Taiwan, Singapore, and Thailand.
- Invitational performance at the 27th International Society for Music Education World Conference 2006, Kuala Lumpur.



Skills and interests

C#

Java

Python

ASP.NET

HTML

CSS3

JavaScript

TypeScript

jQuery

D3.js

Backbone.js

Knockout.js

SQL

MediaWiki

LaTeX

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

Japanese (elementary)

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