

Brian Chen

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Education

University of Queensland

St Lucia, Australia

BACHELOR OF ENGINEERING (SOFTWARE)

Feb 2016 - Dec 2019

- GPA: 7.0/7.0
- UQ Excellence Scholarship; Hawken Scholars Program
- Frank Joseph Murphy Bursary - awarded to one student each semester from school of ITEE for exchange studies.
- *Relevant coursework*: Compilers, Machine Learning, Reasoning about Programs, Programming in Large

University of Texas at Austin

Austin, USA

STUDENT EXCHANGE (COMPUTER SCIENCE)

Aug - Dec 2017

- GPA: 4.0/4.0
- *Relevant coursework*: Algorithms and Complexity, Computer Organisation and Architecture (OS)

Projects

Automated Guitar to Score Transcription

Feb 2017 - current

PYTHON

brianc.me/tags/#MIR-ref

- Used Dynamic Time Warping (a 2D-dynamic programming problem) to align artist recordings with unofficial tabs at onsets.
- Implemented an online constant-Q transform algorithm so that real-time transcription can be performed.

TetrisCube Solver

Jan 2018

PYTHON

github.com/brianc118/tetriscube

- Solver for n -dimensional tetris. Problem was reduced to a variant of *set-cover* and solved with linear programming.

Wifree | HackMIT

Sept 2017

PYTHON, SWIFT

github.com/brianc118/wifree

- Text messaging service allowing users to get directions to the nearest free WiFi access point.
- Created an iOS app that sends a text message of GPS location in the required format. Another teammate developed the Android app.
- Worked on the backend with Python and APIs including Twilio, Foursquare, and Google Maps. Server set up with Flask on Google Cloud.

DriveSafe | Uearthed Hackathon

April 2017

PYTHON

github.com/brianc118/uneearthed2017

- Platform for commercial vehicle drivers and managers to receive continuous feedback on driving safety/performance.
- Worked with Python on the backend to gather insights on safety metrics and also pass on to web app.

Self-balancing ballbot

Oct 2015 - Dec 2015

C++

brianc.me/tags/#Ballbot-ref

- Created an omnidirectional robot that balances on any sufficiently sized ball. Can be controlled via bluetooth.
- Experimented with control systems and ended up using PID control on each axis.

Autonomous soccer robots | Robocup

Feb 2013 - Oct 2015

ARDUINO/C++

brianc.me/tags/#Robocup-ref

- Developed software for two soccer-playing robots that communicate using XBee radio and feature goal-tracking using the CMUCam5.
- Designed the PCB, CNC'ed, and laser-cut parts.

Experience

Brisbane Boys' College

Toowong, Australia

ROBOTICS COACH

Jan 2016 - Jun 2017

- Mentored a small class sized group of students to compete in the open and lightweight soccer divisions of Robocup Junior.
- Two teams won at the national level in their respective divisions (2016); one team later competed in Nagoya, Japan (2017).

Queensland Brain Institute

St Lucia, Australia

SUMMER RESEARCHER - GOODHILL COMPUTATIONAL NEUROSCIENCE LAB

Nov 2016 - Feb 2017

- Developed a flexible axon guidance simulation tool to explore quantitative effects of molecular cues *in vivo*.
- Created models for collision detection and diffusion of finite point sources of cues.

Awards

2017	1st Place - Uearthed Hackathon	Brisbane, Australia
2015	ATAR 99.90; QCAA Academic Commendation	
2015	1st Place - Robocup Junior International - Superteam competition	Hefei, China
2015	Top 100 - Australian Mathematics Olympiad (invitational)	