CHAN JUN SHERN

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Education

2014-Current **Imperial College London**
4th (final) year MEng Electrical and Electronic Engineering student
Expected graduation 2018 (Predicted 1st Class Honours)

Favorite Modules:	*Artificial Intelligence*	93%	*Algorithms and Data Structures*	94%
	Software Engineering	84%	*High Level Programming*	*73%*

Others: *Pattern Recognition* *High Performance Computing* *Machine Learning for Computer Vision*
Computer Graphics *Embedded Systems* *Computer Architecture*
Mathematics (Linear Algebra, Probability & Statistics, Numerical Methods)

Work Experience

2018 **Coding Tutor** at Fire Tech Camp
- Worked part-time throughout my final year of university, teaching a variety of courses from basic tech literacy for children (8-12 years), to Python programming for teens (12-15 years). Class sizes ranged from 6-12 students at a time
- Received accolades from students and parents for **inspirational teaching above and beyond the curriculum**

2017 **Autonomous Vehicle Intern** at nuTonomy
- Successful 6-month placement at Autonomous Vehicle startup nuTonomy, resulting in a return offer upon graduation
- Worked widely on a variety of projects involving systems for Autonomous Vehicles, with a concentration on **R&D within the Machine Perception team**. My main contribution was developing a novel method for extrinsic calibration of self-driving cars; the project involved research in 3D computer vision, coding, and testing
- Exhibitor for nuTonomy at the **2017 IEEE International Conference on Robotics and Automation (ICRA)**

2017 **Repair Coach** at Sustainable Living Lab
- Volunteered for 3 months under the makerspace's "Repair Meetups" programme, which encourages members of the public to bring faulty appliances for troubleshooting and repair under the guidance of the Repair Coaches
- Volunteered at **Maker Faire Singapore 2017**, as a mechanical tools demonstrator for our sponsor Bosch

2016 **Engineering Lead** for Imperial College Tech-Art Installation: Sensorium
- **Led a team of 8 engineers** on the engineering side of a larger multidisciplinary team for the construction of an interactive tech-art exhibition consisting of a 5m long LED "interactive mirror" (6720 LED's)
- The project was exhibited at the annual Imperial Festival 2016 which attracted over **15,000 visitors**
- More information about the project online at https://github.com/JunShern/Sensorium

2016 **Data Analysis Intern** at Maxis Berhad Malaysia (Telecommunications company)
- Used R to perform customer data analytics, and **took initiative to create a web-app using R and R Shiny** to streamline a labour-intensive part of the workflow
- Web-app available online at https://github.com/JunShern/sliced

Awards

2014 Maxis Scholarship for Excellence
(Full scholarship for degree at Imperial College London - **1 of 10 scholars selected from over 5000 applicants**)
2012 Merit Scholarship (Methodist College Kuala Lumpur)
2011 Outstanding Achievement Award - 10/10 A's in Malaysian national examinations (Wesley Methodist School)

Skills

Programming :	*Languages*	C	C++	R	Python	Javascript	F#	Prolog
	Skills	Linux	ROS	Unity	Keras	Tensorflow	Git & Github	
Hardware :	Arduino	Raspberry Pi	FPGA & Verilog	Circuit design & analysis				
	PIC	AVR	CAD for 3D printing	Laser cutting				

Notable Projects

2018 **Human-Robot Collaboration for Musical Tasks** *(Masters / Final Year Project)*
- (Ongoing) Year-long project on **algorithmic composition and AI musicianship**, with Professor Yiannis Demiris
- Involves heavy use and research into state-of-the-art **deep learning** techniques applied to the domain of music composition, and tied in with human-robot collaboration ideas towards the goal of creating a robot capable of playing a musical instrument for live, unscripted, music accompaniment
- Technologies: Python, Tensorflow & Keras, Linux, ROS

2016 **ARMadillo** *(Group project for 3rd year module, High-Level Programming)*
- F# implementation for a ARM emulator which assembles and simulates the ARM7TDMI instruction set, cross-compiled using FABLE into a JavaScript Electron app
- Website link: https://github.com/aaronlws95/hlp-project-2017

2015 **Neurospell Brain-Computer Interface** *(2nd year Electrical and Electronic Engineering project)*
- Worked in a team of 7 members over the course of 6 months to create a low-cost Brain-Computer Interface device to allow motor-impaired people to type on a computer keyboard
- Project website: http://www.ee.ic.ac.uk/jorn.voegtli14/yr2proj/default.html

2015 **Pyano** *(Personal project)*
- Wrote a powerful open-source virtual MIDI piano keyboard in Python, which allows users to use QWERTY keyboards as piano (MIDI) keyboards, routable to software synthesizers and other MIDI-compatible programs
- More information (and demo video) available at https://github.com/JunShern/Pyano

Achievements & Responsibilities

2016 - 2017

Imperial College Data Science Society - Advanced Team Member
- **1 of 10 handpicked members to represent the society** in competitions and exclusive events with industry partners
- Volunteered as a Teaching Assistant in several of the society's introductory R and data science workshops
- Placed in Top 50 teams in Europe for **Google Hash Code 2017**

Imperial College Advanced Hackspace - Student Champion (EEE)
- Regularly involved in the Advanced Hackspace which runs hackathons and classes, and provides prototyping facilities such as laser cutters and 3D printers for the Imperial College community
- Point-of-contact and **maker evangelist** to encourage students to get involved with projects in the Hackspace

TEDxImperialCollege Organizing Committee - Speaker Coordinator
- In charge of identifying and coordinating with high-impact speakers to speak at TEDxImperialCollege 2017
- Did graphic design for marketing materials including the event website, posters, and booklets

Imperial College Energy Society - Webmaster
- Created new society website, led rebranding by designing a fresh new logo and online visual identity which helped **drive a >200% increase in society membership** (from 100 members to 350 members)
- Website currently hosted at https://www.union.ic.ac.uk/scc/energy/

2015 - 2016

IC Hack '16 *(Imperial College Hackathon 2016)*
- **Prize Winner ("Best use of Amazon Web Services"):** Worked in a team to create a web-application which makes location-based recommendations of free parking spaces by analyzing aerial images

HackScience 2016 *(Hackathon for lab automation tools)*
- **Prize Winner (1st Runner Up):** Our "Automated Fractioning Column" automates tedious mechanical lab work to the effect of potentially saving hundreds of hours of labour a day in chemical laboratories
- **Outstanding Individual Prize:** Special honour for being a key contributor to my team and the overall event

Massively Open Online Courses (MOOCs)

Extra-curricular online courses pursued for my own interest (consisting of lectures, quizzes & programming coursework)

2018	**Deep Learning Specialization**	by Andrew Ng; deeplearning.ai (Coursera)
2016	**Intro to Artificial Intelligence**	by Sebastian Thrun and Peter Norvig (Udacity)
2016	**Intro to Computer Vision**	by Aaron Bobick (Udacity)
2015	**Machine Learning**	by Andrew Ng; Stanford University (Coursera)
2014	**Data Science Specialization**	by Jeff Leek, Roger D Peng & Brian Caffo; Johns Hopkins University (Coursera)