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: *Machine Learning* *Digital Image Processing* *Pattern Recognition*
Embedded Systems *High Performance Computing* *Computer Architecture*
Mathematics (Linear Algebra, Probability & Statistics, Numerical Methods)

Work Experience

2017 **Autonomous Vehicle Intern** at nuTonomy
- 6-month industrial placement at Autonomous Vehicle startup nuTonomy's Singapore office
- 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 RADAR sensors on our self-driving cars - the project involved research in state-of-the-art 3D computer vision techniques, coding, and testing the system
- 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 tools demonstrator for our sponsor Bosch

2016 **Engineering Lead** for Imperial College Tech-Art Installation: Sensorium
- The project was built for exhibition at Imperial College London's annual event Imperial Festival 2016. The festival attracted **15,000 visitors**, many of whom explored our exhibition consisting of a 5m long, full-body LED mirror (6720 LED's) where silhouettes of people are displayed in real time
- **Led a team of 8 engineers** over the course of 3 months in planning and implementation, and worked closely with other teams within the project consisting of people from a variety of backgrounds including scientists, design engineers, art installation specialists and fashion designers
- 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 analytics tasks, and **took initiative to create a web-app using R and R Shiny** to streamline a labour-intensive part of the workflow
- 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++	F#	R	Python	Prolog	Javascript
	Skills	Linux	ROS	Unity	Git & Github			
Hardware :	Arduino	Raspberry Pi		FPGA & Verilog			Circuit design & analysis	
	PIC	AVR		CAD for 3D printing			Laser cutting	

Notable Projects

2016 **ARMadillo** *(Group project for 3rd year module, High-Level Programming)*

- F# implementation for a cross-platform ARM emulator which assembles and simulates the ARM7TDMI instruction set
- Implemented emulator features for debugging such as stepping, breakpoints and displaying register states at each step
- Website link: https://github.com/aaronlws95/hlp-project-2017

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

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
- Personally in charge of the software interface between the our custom UI and signal processing software OpenVibe
- Project website: http://www.ee.ic.ac.uk/jorn.voegtli14/yr2proj/default.html

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 inviting high-impact speakers to speak at TEDxImperialCollege 2017
- Led the development of the overarching event theme, "Blueprints"

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** (went from 100 members last year to 350 members during my year)
- Website currently hosted at https://www.union.ic.ac.uk/scc/energy/
- **Helped secure a £1,000 grant** for running society projects, including a fusion reactor design project

2015-2016

IC Hack '16 *(Imperial College Hackathon 2016)*

- **Special Prize Winner "Best use of Amazon Web Services":** Worked in a team to create a location-based web-application which recommends free parking spaces from drone camera images

HackScience 2016 *(Hackathon for lab automation tools)*

- **Prize Winner (1st Runner Up)**: Our prize-winning "Automated Fractioning Column" detects the infrared absorbance of an experimental solution, distributes the solution into separate vials, and uploads experiment data to a cloud server for visualization. The project has the potential to save hundreds of hours of labour a day in chemical lab environments.
- **Outstanding Individual Prize:** Special honour received for helping and giving technical advice to other participants, as well as for being a key contributor to my team

Massively Open Online Courses (MOOCs)

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

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 (Coursera)

2014 **Johns Hopkins Data Science Specialization** by Jeff Leek, Roger D Peng & Brian Caffo (Coursera)