

# CHAN JUN SHERN

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## Education

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### 2014-Current Imperial College London

4th (final) year MEng Electrical and Electronic Engineering student

Expected graduation 2018 (Predicted 1<sup>st</sup> 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

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### 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>
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## Awards

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### 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)

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## Skills

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

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## Notable Projects

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### 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>

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## Achievements & Responsibilities

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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

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## Massively Open Online Courses (MOOCs)

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

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**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)