CHAN JUN SHERN

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Education

2014-Current **Imperial College London**
3rd year Electrical and Electronic Engineering (MEng) student
Expected graduation 2018 (Predicted 1st Class Honours)

Best modules:	*Algorithms and Data Structures*	94%	*Digital Electronics 1*	78%
	Software Engineering 1	84%	*Intro to Computer Architecture*	76%

Others: *Analysis of Circuits* *Signals and Linear Systems* *Analogue Electronics*
Control Engineering *Mathematics (Linear Algebra, Probability & Statistics, Numerical Methods)*

2012-2013 **Methodist College Kuala Lumpur**

Did A-Levels in :	*Maths*	A*	*Physics*	A*
	Psychology	A*	*Economics*	B

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 :	(Fluent in)	C	C++	Python	R	HTML	CSS	JavaScript	Processing
	(Experience in)	C#	Matlab	Bash	Java	php	Lua	PostgreSQL	

Hardware :	Arduino	Raspberry Pi	Circuit design & analysis
	PIC	AVR	FPGA & Verilog
	3D printing	Laser cutting	CAD modelling (SketchUp, Fusion 360)

IT :	Linux System Administration	Version Control (Git & GitHub)	Game Development (Unity)
	Graphic Design (Adobe Photoshop, Illustrator)		Video Editing (Adobe Premiere Pro)

Languages : Fluent in English (1st language) Malay Mandarin

Work Experience

2016 **Engineering Lead for Imperial College Tech-Art Installation: Sensorium**
- The project was built for display at Imperial College London's annual event Imperial Festival 2016, 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

2016 **Engineering Consultant (Paid freelance contract) for The Tile Project**
- The project was a capacitive touch-based human-computer interface developed at Royal College of Art, London
- Prototyped electronics on Bare Conductive's Touch Board (Arduino-like microcontroller), and created interactive visuals in Processing to demonstrate how the controls map onto a computer
- Project website: http://www.tileproject.info

Projects

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
- Software contribution : Created a Python program which flashes letters in a grid to stimulate a response in the user's visual cortex, and wrote the interface between the custom UI and our chosen software OpenVibe, which performs digital signal processing and signal classification
- 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

2014 **Football-playing Robot** *(Extra-curricular project with Imperial College Robotics Society)*

- Used Matlab and Simulink with Arduino and Raspberry Pi to program differential drive robots to play football

2013 **Autonomous Hovercraft** *(Extra-curricular project with University of Nottingham Robotics Society)*

- Helped design and build small Arduino-based hovercrafts which used ultrasonic distance sensors to navigate and race in a constructed closed-circuit racetrack

Massively Open Online Courses (MOOCs)

Extra-curricular online courses pursued for my own interest,
consisting of on average 20 hours of lecture videos, quizzes and practical programming coursework.

2016 **Intro to Artificial Intelligence** by Sebastian Thrun and Peter Norvig (Udacity)
Gained understanding of search algorithms and heuristics, Machine Learning algorithms, Bayes networks, Markov Decision Processes, Hidden Markov Models, and Particle Filters & Kalman Filters

2016 **Intro to Computer Vision** by Aaron Bobick (Udacity)
Learned about image processing using convolution kernels, edge detection, Hough transforms, feature detection (Harris detector, SIFT detector), and 3D vision topics (SLAM, SfM)

2015 **Machine Learning** by Andrew Ng (Coursera)
Learned to apply various machine algorithms such as Linear Regression, Logistic Regression, Neural Networks, Support Vector Machines, and k-Means Clustering

2014 **Johns Hopkins Data Science Specialization** by Jeff Leek, Roger D Peng & Brian Caffo (Coursera)
(**Data Scientist's Toolbox, R Programming, Getting & Cleaning Data** - Completed with Distinction)
Gained familiarity with R, learned about data science workflows and best practices

Achievements & Responsibilities

2016-2017

Imperial College Energy Society - Webmaster

- Created new society website, led rebranding by designing a fresh new logo and online visual identity
- Gained experience in web development, in particular using php and CSS within a Wordpress.org setup
- Website currently hosted at https://www.union.ic.ac.uk/scc/energy/

2015-2016

IC Hack '16 special prize "Best use of Amazon Web Services"

- Hackathon prize winner: Worked in a team to create a web-application which recommends location-based free parking spaces from security camera images

HackScience 2016 1st Runner Up - Automated Fractioning Column

- Hackathon prize winner: Worked in a team to automate common fractioning tasks in chemistry labs, capable of saving many hours of human labour per lab per day
- Project to be developed by team members into a startup to make automated lab equipment widely available

Imperial College Union Game Development Society

- Active member, worked on several games in Unity (plans to release in 2017)