Yi Chen Hock

Undergraduate Engineer

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EDUCATION

University of Cambridge, Queens' College
MEng Engineering
2019-2022 (currently in 1st year)
Modules: Mechanics, Structural Mechanics, Electronics, Mathematics

Priestley College, Warrington – Graduated 2018
A*A*A*A* A B at A-Level (Maths, Further Maths, Electronics, Physics, Music, Chinese)

NOTABLE ACHIEVEMENTS

EW Weekly BrightSparks 2018 Winner
Youngest recipient (at age 17) of the under 30s electronics competition hosted by Electronics Weekly, sponsored by RS Components:
https://www.electronicsweekly.com/news/ew-brightsparks/ew-brightsparks-2018-profile-yi-chen-hock-2018-04/

This was for my independently developed electronics project which used an Arduino and PIC AXE microcontroller to create a game of Tic-Tac-Toe and Snake, using an RGB dot matrix and multiplexed 7-segment displays. I was also featured in an IET news article (https://eandt.theiet.org/content/articles/2018/05/meet-six-brightsparks-millennials-engineering-a-better-future/).

EXPERIENCE

SP Energy Networks – Year in Industry Student
Sep 2018 – Aug 2019, Prenton, UK

I performed data analysis on the vegetation intrusions of overhead lines, managed innovation projects by setting up a database Microsoft Access using SQL and VBA programming and collected weather data for heat pump analysis from Dark Sky API using Python pull requests.

National Nuclear Laboratories – Work Experience
July 2017 (1-week), Birchwood, UK

I learnt about laser spectroscopy and geological disposal of nuclear waste.

DSO National Laboratories – Attachment
July 2016 – Sep 2016 (2-months), Singapore

I researched electromagnetic weapons, modelled a railgun in SolidWorks and built and tested a small railgun in a laboratory.

SKILLS

Programming Languages
Good knowledge of Python, Arduino (C++), VBA
Basic knowledge of MATLAB, Linux, SQL, PIC AXE (low-level assembly language)

Software
Good knowledge of Microsoft Access and Excel, SolidWorks, Krita, GIMP

Basic knowledge of LT Spice, Photoshop

SELECTED PROJECTS

Organ Pedalboard with Capacitive Sensing
Using aluminium foil and cardboard, I programmed an Arduino with PWM sound (with sampled organ recordings) to create an organ pedalboard: https://youtu.be/HGT1bRfzNQA. The greatest difficulty was achieving two-note polyphony.

Python Stock Screener
I worked on developing a stock screener which retrieved balance sheet data for 3000+ companies using Python and analysed the data to produce graphs of free cash flow against net income for fundamental analysis.

Automated Water Level Control in a Tank
I worked with United Utilities plc UK, in a team of four, on the Engineering Education Scheme. We built the model, controlled by an Arduino and ultrasonic sensors, on a 3-day residential at the University of Liverpool and presented to a panel of nine judges where we won the Best Presentation Award in the North-West.

LANGUAGES English (Native), Chinese (Native), Japanese (Basic)

ACHIEVEMENTS

Employment
Contribution to the Business Awards, EDT UK, 2019

Academic
British Physics Olympiad AS Challenge Gold Award (top 50), 2017
British Physics Olympiad Gold Award (top 100), 2018

Music
Viola Beach Scholarship, Priestley College UK, 2016
Piano ABRSM Grade 8 Merit, 2017
Warrington Youth Orchestra (first violinist), UK, 2008 - 2018
Organ scholarship, St Wilfrid's Church Grappenhall UK, 2017 - 2019

REFERENCES

Eur Ing Geoff Murphy CEng MEng MIET
Lead Engineer
Commercial & Innovation Team – Network Planning & Regulation

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