MARWIN WONGJARUPUN

MRes Medical Device Design and Entrepreneurship - Imperial College London

Tel: +44 07752457758 **Email**: marwin111@gmail.com
LinkedIn: www.linkedin.com/in/marwinw **Website**: marwinwongjarupun.dev

EDUCATION

Imperial College London, Department of Bioengineering **London, United Kingdom**
MRes Medical Device Design and Entrepreneurship *2023 - 2024*

- Modules: Medical Device Entrepreneurship, Computational and Statistical Methods for Research, etc.

University of Leeds, School of Electronic and Electrical Engineering **Leeds, United Kingdom**
Bachelor of Engineering (Hons) Electronics and Computer Engineering *2020 – 2023*

- Classification: Upper Second Class (2:1) Honors
- Modules: Embedded Systems, Distributed Systems, User Interface, Algorithms, Parallel Programming, etc.

Triam Udom Suksa School **Bangkok, Thailand**

- Track: Science - Maths - Chinese *2016 – 2020*

WORK EXPERIENCE

XR Bootcamp XR Foundations and Prototyping Bootcamp **Germany, Remote**
Prototyper *August - December 2022*

- Grade: High Honours
- Chosen as one of the 15 students for the Beyond Inclusion scholarship (out of 410 applicants)
- Focused on C# programming and Unity VR Development using Oculus Quest 2
- Developed 4 XR Prototypes (alone) and 2 XR MVPs (team)
- Created 1 Prototype in collaboration with industry partner company Pearson

University of Leeds Summer Internship **United Kingdom**
Student Intern *June - October 2022*

- Added remote functionality to hip simulator as IoT device (can simulate through cloud platform)
- Interfaced with Arduino Duo with 32-bit ARM core microcontroller using C++
- Applied PWM signal to control stepper motors

Chinese University of Hong Kong Summer Undergraduate Research Programme **Hong Kong, Remote**
Student Researcher *June – August 2022*

- Grade: A
- Created Pong-like game to encourage stroke patients to perform exercises that improve brain function
- Developed using Unity, C#, and Oculus Quest 2

Shanghai Jiao Tong University Summer Research Internship Program **China, Remote**
Student Researcher *June – August 2022*

- Grade: A
- Investigated technology regarding 3D non-rigid registration of human liver, with input of pre-operative 3D model and intra-operative deformed model, and output
- Coded using VTK and python

Transitional Housing for the Homeless **Thailand**
Researcher *June 2021 – December 2021*

- Studied the increasing homelessness phenomenon in Thailand through collecting statistics
- Constructed 2 proposals for government and research institution grants

UNIVERSITY PROJECTS

Microfluidic T-Cell Selection by Cellular Avidity *2023 – 2024*

- Completed market analysis about validity of device looking at competitor's products and product fit
- Researched technological background and studied the device's potential in cancer immunotherapy

Microfluidic Mixer at Imperial College Advanced Hackspace *2023*

- Designed in Fusion360 to be 3D printed (syringe inlets) and lasered (microfluidic channels)
- Utilised 8-wavelength spectrophotometer connected to Arduino Nano to detect mixing

Microfluidics Integrated Microwave Sensor Using Additive and Subtractive Manufacturing *2023*

- Designed, simulate and develop a microfluidic device that uses microwave sensors that detect, identify, and quantify reactions of fluidic and liquid mixtures
- Incorporated additive manufacturing (ie. 3D printing) and subtractive manufacturing (ie. laser cutting)
- Designed and developed using CST Microwave Studio Design package

Integrated Web Service Client in Distributed Systems Module *2022*

- Built application with own RESTful web services using Jersey and Java
- Implemented existing Youtube API to extract comments from video
- Integrated 3 web services with a client written in Python

GUI Design for Video Playing Application in User Interfaces Module *2021*

- Performed a PACT Analysis on prototype to scope possible requirements
- Iterated 5 Development Cycles Using Qt to create user interface design
- Evaluated cycles with potential users using cognitive walkthrough and heuristic evaluation

Digital Timer Using DE10 Lite Board in Microprocessors and Programmable Logic Module *2021*

- Written with Verilog to program FPGA board
- Programmed using sequential logic and test benches for functionality
- Applied logic table from binary to binary coded decimal to create timer function

Refreshable Braille Display in Digital Electronics and Microcontrollers Module *2020*

- Built using 6 solenoids and Arduino
- Coded program that outputs braille characters according to input string
- Implemented safety features such as using diodes to prevent accidental discharge

LEADERSHIP POSITIONS

MRes Medical Device Design and Entrepreneurship **London, United Kingdom**
Course Representative *2023 – 2024*

- Solve issues that arise in cohort through reporting to university
- Hold monthly panel discussions and academic seminars from medtech industry experts for cohort

Leeds Debating Union **Leeds, United Kingdom**
President *2021 – 2022*

- Hosted weekly debates with tailored topics with 200 members
- Facilitated collaborations between two societies regarding controversial worldly issues

MedTech Foundation Leeds **Leeds, United Kingdom**
Internship Officer *2021 – 2022*

- Communicated with research centres and medical technology firms
- Aided 5 regional centres in its setup through online marketing

TECHNICAL SKILLS

Python	C/C++	C#	Unity	Fusion360
Java	Git	MATLAB/R	Microsoft Word, Excel, PowerPoint, Teams	

LANGUAGE SKILLS

Fluent English and Thai
Proficient Chinese Mandarin (listening and speaking)
Beginner French

KEY EMPLOYABILITY SKILLS

Innovation – Pitch use of VR for children on the autism spectrum for pain assessment to industry leaders
Self-discipline – Learn Chinese and French throughout high school and university independently
Teamwork – Build fighter robot with teammates for Robot Fighting League

INTERESTS

Web Development: Deployed portfolio website at marwinwongjarupun.dev *September 2023*
Human-Computer Interaction: Completed HCI Course by Georgia Tech edX *August 2021*
Machine Learning: Completed Stanford Coursera Course with modules in image processing *July 2020*
Piano: Merit in Piano Trinity Grade 6 and Distinction in Piano Trinity Grade 5 *June 2017*