Jaafar Rammal

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Education:

Imperial College London (MEng Computer Engineering) **Sep 2018 – Jun 2022**

- 1st year + 2nd year Dean's List for Academic Excellence (class top 10%).
- Relevant Modules: Compilers, Comp Arch, Databases, Data Structures, Networks & Distributed Sys, OOP, HLP, Stats

Grand Lycée Franco-Libanais: **Sep 2015 - Jun 2018**

- French Baccalaureate (Scientific). Top 5% on school with 18.35/20. IB in History & Geography and Arabic.

Relevant Work Experience | Projects:

ARM, Software / Hardware Engineer **Aug 2020 – Oct 2020**

- I extended an existing UVM **Verilog** generator with hierarchical register blocks generator and wrote my own **Python** verification predictor generator. I also deployed an **Angular** UI generator to automate hardware configurations

Imperial College, System / Software Development **Jun 2020 – Aug 2020**

- Along 5 other students, I designed and built from scratch a scalable virtual world for Imperial College for remote teaching next year. Features include 3D audio, lecture links, interactive quizzes. Used **Java, CI/CD, NodeJS, Angular**

Schlumberger, Software Engineer: **Jun 2019 – Sep 2019**

- **Built a web app** for organized, secured access to all reports inside DrillPlan to review desired petroleum activity reports, even offline. The product was **pushed to production**. Used **PWA Features**, **Angular 7, Service Workers.**

Imperial Part-time experiences **Oct 2019 – Jun 2020**

- Imperial College Robotics Society Committee (Events Coordinator)
- Undergraduate teaching assistant for algorithms and data structures

Relevant Projects:

- **Founder / CTO of startup** CloseRangeTechnologies.ltd, building technologies to improve the post-pandemic world
- Built a **MIPS CPU simulator (C)**, a **C to Assembly Compiler (C)**, and **a 16-bit RISC CPU with custom ISA** (**Verilog**)
- Interactive Flappy Bird with users flapping to play. Built with a **Xilinx PYNQ-Z1 FPGA** using **Vivado and HLS.**
- **Encryption Mobile App** (**Swift**, **Java**): share and retrieve message hidden in images through steganography.

Competitions | Events | Awards (latest / relevant):

ICHack Thought Machine runner-up **8-9 Feb 2020**

- Built ShopWise, your **iOS** interactive personal shopping assistant that offers healthier, cheaper, and greener alternatives, with a supply chain history using a **Kaleido distributed ledger** for transparency of the supply chain

Hack Cambridge: 1st Prize Reply Green IoT + MLH mongoDB **18 - 19 Jan 2019**

- Built an **IoT network** with trash can sensors and street cameras to sense the vacuity of public bins and **locate trash** on the streets (computer vision). The data is displayed on a map for an **iOS** trash collection **game**, Pokémon-Go style.

BGN UK Hackathon (Google): 1st Place **26 - 27 Oct 2019**

- Built a mobile app encouraging users to **scan, collect, and bin trash** from the streets and win points. These points are swapped with **vouchers promoted by rising businesses**. A local leaderboard recognizes those who clean more.

HackZurich19: *Helsana* Workshop Award (for Health Product) **27 - 29 Sep 2019**

- Built with **Swift & Python** (team of four) iOS app connected to geolocation data, Google trends, fitness and health trackers, to predict potential disease risk, explain the factors, and offer prevention advice for a healthier lifestyle.

Hack4Good: Hacker of The Day (Microsoft) **16 Feb 2019**

- Using **MicrosoftFlow** and **PowerApps**, our team built *BloodMatters*, a platform for technical hospital users to **manage blood stocks**. In an emergency, one can **instantly reach out matching nearby donors** by text message.

BGN UK Hackathon (Google): 1st Place **26 Jan 2019**

- Built a mobile app to **learn African languages,** using **swift** and **firebase.** It includes classic language games as wee as an **interactive chatbot** to simulate realistic scenarios for language practice (restaurant command, …)

Robotics Team Member (FIRST[1] Competitions FIRST Tech Challenge): **2014 - 2018 (4 competition seasons)**

- Team of four members, working at home and financing our seasons through assembling and selling 3D printers. Earned **7 national awards, national representatives** in the international competition twice. Developed skills in **critical thinking, project management**, **business plan**, **CAD modeling, mechanical assembling.** Implemented a **Java** app for wireless joystick-control, **hardware control**, **assisted driving** (gyro + acc), **image recognition for navigation**

Technical Skills and Personal Interests:

- Proficient in **C++, Java, Swift.** Comfortable with **Python, TypeScript, Verilog, Assembly.** Progressing in **JS, F#.**
- Shinkyokushin Karate, since 2006. **Black belt, competed on international level**. Summer assistant for kids' classes.
- Classical guitar player since 2010 with three personal compositions.
- Proficient in **Arabic**, **French**, and **English**. Learning **Spanish.**

1- FIRST (For Inspiration and Recognition of Science and Technology): international youth organization operating robotics competitions. https://www.firstinspires.org/robotics/ftc