Jaafar Rammal

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Education:

Imperial College London **Sep 2018 – Jun 2022**

- **MEng Computer Engineering (Electronics and Information Engineering).**
- 1st year Dean's List for Academic Excellence with 75.39/100 (class top 10%).
- Relevant Modules: Comp Arch, Data Structures, Networks & Distributed Sys, Signals & Comm, Lang Proc, Databases.

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:

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

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

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.**

Two-weeks Software Internships:

- **NEEDS:** built over a school app a frontend skeleton for parent-users to access children grades, calendar, and agenda.
- **Dynamesh SAL:** built a **Java** database to manage student profiles, focusing on the **user approach** and **data structure**.

Relevant Projects:

- **(Current)** CTO at 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:

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.

Paris-Saclay Conference Speaker (Wolfram Alpha) **6 - 7 Jun 2019**

- Presented a Mathematica project on Data Protection and Machine Learning for financial predictions & classification.

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.** Comfortable with **Python, TypeScript, Swift, Verilog.** Progressing in **JS, ARM Assembly.**
- 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