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, Distributed Systems, 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 College Robotics Society Committee (Events Coordinator) **Aug 2019 - Present**

- Organizing 2019-2020 term events, including Hackathon, Talks, Ice Skating, Christmas Dinner, Movie Nights.

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

- **Built a web app** for organized, secured quick access to all reports inside DrillPlan (a Schlumberger software) to review desired petroleum activity reports. Users can cache the required information and use it offline. The team, satisfied with the product, **pushed it 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:

- Implemented a **custom 16-bit RISC CPU on a Cyclone V FPGA** with **custom ISA and assembler** using **Verilog**
- Building a **MIPS CPU simulator** (completed) and a **C-Assembly Compiler** (ongoing)
- 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