COLIN LAGANIER

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Third year design engineering student looking to further develop my skills and apply them during a 6-month placement starting April 2021.

||| EDUCATION

2018-present **Imperial College London** | *MEng Design Engineering*
Modules include: Computing, Design, Electronics, Materials, Mechanics, Mechatronics, Thermodynamics.

2015-2018 **Lycée Français Jean Monnet, Brussels** | *French Baccalauréat*
Scientific Track – Computer Science specialty – 17.05/20 (Très Bien)

||| WORK EXPERIENCE

Summer 2020 **Imperial College London** | *Full Stack Developer*
- Paid ten-week internship to create the Imperial student-run makerspace hardware and software.
- Built, tested and deployed the online platform - controlling an IOT machinery permissions system and 3D printing farm - optimizing workflow and reducing energy use.
- Created the backend with Node.js and the Express.js framework, and implemented multiple REST APIs.

Technologies: Node.js, React.js, Express.js, MongoDB, HTML5, CSS3, Git, Raspberry Pi, Linux

Summer 2019 **Loop** | *Front End Developer*
- Paid five-week internship in an artificial intelligence-based event-technology start-up.
- Created a web dashboard for users to see current and past events data - shared photos, playlist, attendees.
- Increased platform usage by 25% over the following month.

Technologies: React.js, HTML5, CSS3, Git

Summer 2016 **Parrot SA** | *Job Shadowing*
- Shadowed in a leading drone company's R&D department – evaluated the influence of materials on the flight of drones and analyzed physical properties of different drone designs.

||| EXTRACURRICULAR ACTIVITIES

2020-present **Imperial Entrepreneurs** | *Treasurer*
- Led financial budgeting, obtained sponsorships and maintained professional relationships with sponsors - doubled the annual sponsorship from the previous year.

2020-present **Design Engineering Society** | *Student Expert*
- Helped and trained students with equipment (CNC, 3D printers, etc.) in the Imperial makerspace.
- Organized and led Autodesk Fusion 360 CAD workshops for students.

2019-present **{Code Club}** | *Python & Robotics Tutor*
- Volunteered to teach a weekly class for children aged 9 to 15 in Fulham Library.
- Taught basics of coding and ran small projects (remote control car, self-driving, etc.).

2019-Present **Imperial Racing Green** | *Seat and Firewall Engineer*
- Redesigned, tested and built the new Electric Vehicle's seat, firewall and low voltage electronics box for the Formula Student Competition – created with a goal of easy upgradability and reduced weight.

||| RELEVANT PROJECTS

Robo Colorizmo| *C++, Python, Robotics*
- Second year Mechatronics project, created a 3-axis robotic gripping arm using OpenCV to find and sort colored cubes.
- Used a Raspberry Pi to run the computer vision program (Python) and an Arduino Uno for the robotic commands (C++).

Tetriling Challenge | *Python*
- Second year Computing project, applied fundamental algorithmic principles: object-oriented programming, greedy algorithm, binary tree search and depth first search.
- Fastest algorithm of the year and ranked among the top 10 in accuracy (95% accurate in 0.004s for 0.7 density 1000x1000 matrix).

Cyclone Curler | *Autodesk Eagle, Keyshot, Solidworks*
- Second year Design Project, created a battery powered curling iron for visually impaired users inspired by a cyclone separator.
- Designed for manufacturing using Solidworks, using FEA, flow simulations and thermal calculations to ensure feasibility.

||| SKILLS

Programming:
CSS3, C++, HTML5, JavaScript, MATLAB, Python, SQL

Manufacturing:
3D printing, CNC, milling, turning, laser cutting, PCB design

CAD:
Inventor, Fusion 360, Solidworks – CAM, FEA, Generative Design

Languages:
French (C2+), English (C2+), Spanish (B2), Chinese (B1)