

# Rowan Aufenast, MEng

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## Roles

Product design Engineer, Manufacturing Engineer, Additive manufacturing Engineer

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## Profile

Flexible product design engineer, graduated with a MEng in product design engineering. Highly flexible engineer with strong mathematical, CAD and creative skills to approach problems from many angles. I have been creating and solving problems for most my active life from Lego to steel, undertaking engineering projects in Education, work and in own time, varying from small electronics to large vehicles.

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## Qualifications

Loughborough University, Product Design Engineering MEng 2016-2021

- 1<sup>st</sup> Class Honours in Product Design Engineering Meng with diploma in industrial studies

Farlingaye Sixth form 2014-2016

- A2 levels- **AAAB** in Maths, Physics, Product Design and General Studies
- AS Levels- **B** Chemistry

Farlingaye High School

- 10 GCSEs **A\*-A**, in Maths, Statistics, Physics, Chemistry, Biology, English literature and Language, Resistant Materials, Systems and Control, History, Psychology and Drama
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## Relevant Skills

### Practical

- Experienced use of **Milling and Turning** machines to produce parts in metal, used in practical university modules. (Mini Mill for personal use)
- Experienced in MIG **welding** skills to produce metal joinery which I used effectively in larger metal fabrication projects.
- Very Experienced with **3D printing** using Cartesian FDM printers, Wanhao Duplicator 4S, 3D Systems Cube and Creality Ender 3 (personal Printers)
- Using and setting up a woodworking **Bandsaw** to operate reliably for use in the work environment to produce wooden, plastic and GFRP parts for projects such as my V8 PC.
- Preparing materials, jigs and workspace to use and operate a **Router** to produce plastic, wooden and fibreglass parts for projects such as my 550mm Hex Rotor Drone platform
- Use of various Metrology equipment including tensiometer and CMM machines

### Engineering and IT

- Experienced using **CAD and CAM** Primarily siemens NX 11 and Techsoft 2D Design, moderate experience using PTC Creo & Fusion 360
  - Experienced using **3D slicing and printing** using Simplify 3D and Cura
  - Moderate experience with Adobe Photoshop for interfaces and poster creation
  - Experienced with Autodesk Sketchbook Graphical art platform for digital sketching
  - Microsoft office suite
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## Employment and Experience

Bosch Home and Garden – Engineering Internship – August 2018 – July 2019

- Worked in pre-launch product quality and responsible for identifying post launch product quality issues
- New product R&D, testing, Quality including CAD work using PTC Creo
- Local expert on tensiometer in metrology lab for various testing
- Industrial diploma/dissertation on bypass blade cutting forces and energy usage, manufactured two test rigs for acquiring data around subject.

#### **Bawdsey Primary School – After school volunteering – Lego League Competition 2012-2016**

- Helped compete nationally and aided the building and programming of a basic robot.
- Taught me how to work with children and keep control of situations
- Gave me skills in teaching and simplifying complex knowledge to a level that will be understood by the audience

#### **St Mary's Church, Bawdsey – Grounds Keeping – September-2014 to September-2016**

- Taught me how to use my time efficiently and conduct my own periodic safety and maintenance checks on grounds keeping vehicles and equipment.
- Independent working and decision making.

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## **Key Achievements**

Successful research design and production of my own.

### **Personal Projects**

- Two-cylinder diesel 3kw generator
- Beetle class fighting robot powered by 3 brushless motors welding horizontal spinner
- 250cc off road go-kart and 124cc off road go-kart
- Conversion of 1000cc diesel UTV in to 550cc petrol recreational of roader
- Restoration and repair of 2000 2.4TD Toyota Hilux
- 550mm Hex rotor drone platform and 218mm FPV racing drone
- V8 Shaped Intel core i7 and GTX 1080 gaming PC with custom cooling and other peoples Rigs
- Various 3D printed products Ranging from headphone holders to drones

### **Curricular projects**

- CTIS System Design for JANKEL Armouring LTD (Meng 5<sup>th</sup> Year Industrial Project)
- Evaporative immersion cooled laptop test rig (Meng 4<sup>th</sup> year)
- Bypass Blades test rigs (industrial placement Project with BOSCH)
- Working model crane and compressed air engine using turning and milling (MEng 1<sup>st</sup> Year)
- Folding Hex rotor drone capable of dropping aid capsules from the air (A2 Product Design)
- Custom Gaming PC enclosed in a desk with full RGB LEDs (A level Product Design)

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## **Hobbies**

- **CAD and 3D printing**, allowed me to expand on my creativity and produce my own products to a higher level of accuracy, quality, and repeatability.
- **Remote Control cars and drones** taught me many skills in electronics and more advanced mechatronics. These skills combined with 3D printing has allowed the creation of my own vehicles and spare parts.
- **Airsoft** has seriously advanced my teamworking and team building skills, to be successful and cooperative with other people in high pressure situations, in addition to this it has increased my knowledge of mechanics and electronics.
- **Of road vehicles**, both driving, modifying of road vehicles for recreational uses
- **Building Things** My true passion is creating new things through a very hands-on approach, a lot of the skills I have learnt are self-taught through hours of tinkering and creating in my workshop.