

# FIRST NAME SECOND NAME

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## EDUCATION

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### 2016-Present:

**X University | (MEng) Mechanical engineering | Expected 1<sup>st</sup> class degree**

#### Subjects studied:

- Kinematics & dynamics
- Tribology
- Linear & Non-linear FEA
- Additive manufacturing
- Parametric modelling
- Mechanics of materials
- Control engineering
- Computer aided engineering
- Drive train dynamics
- Ballistics & rocket propulsion
- Heat transfer
- Thermodynamics
- Fluid mechanics
- Electronics
- Project Leadership

**First year project:** Design, manufacture and test a mechanical device for cutting pieces of wood. Sponsored by DENSO. Our team scored highest by using a scotch yoke mechanism to convert the rotary motion of the motor to reciprocal motion.

**Second year project:** Group leader for a two-semester long project to design an Overall Equipment Effectiveness Monitoring system for DENSO to replace the current manual data recording method. We used Excel VBA and an Arduino with various sensors to automatically log OEE data.

**Third year project:** Research project funded by EPSRC into Laser-Ultrasonic hybrid machining of Aluminium-Silicon carbide metal matrix composite. I created thermal models in matlab and NX11 to predict novel material behaviour. I used SEM imaging to analyse the material microstructure and composition. The novel machining technique successfully reduced cutting forces by 20%.

### 2009-2016:

#### X College

**A2 Level** in Mathematics (A) Further Mathematics (B) Physics (B)

**AS Level** in Design & Technology (A)

**11 GCSEs** Including 10 A\*/A grades, English (A) and Mathematics (A)

## SKILLS

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<b>Siemens NX</b>	3D parametric modelling, Drafting, CAM, Finite element analysis, Rendering
<b>AutoCAD</b>	Drafting, Parametric drawings
<b>Creo</b>	Creo Parametric, Creo Simulation
<b>SolidWorks</b>	3D modelling, Drafting, Rendering
<b>Abaqus &amp; MSC Marc</b>	Linear & Non-linear finite element analysis
<b>Microsoft Office</b>	Word, PowerPoint, Excel, Excel Visual Basic programming

## WORK EXPERIENCE

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### July 2018 - August 2019

#### Mechanical Engineering placement, Company1

- Worked within a multi-disciplinary team and was responsible for the development of existing parts and design of new parts for the highly advanced and automated manufacturing process.
- Undertook design processes which considered material selection and treatment as well as mechanical performance. Utilised assembly level finite element analysis using Siemens NX11.
- Used AutoCAD to generate complex engineering drawings, to the BS 8888 standard, of highly precise parts which were then sent off for manufacture.
- Completed several extensive redesign projects including the redesign of an extruder application process resulting in a 94% cost saving to the company.
- Programmed a new OEE based part tracking system using VBA code which allowed predictions of when parts needed replacing based on previous measurement data. This significantly reduced downtime for preventative maintenance checks.
- Final project involved the complete redesign of a highly complex application system which included FEA and fatigue analysis as well as implementing new materials. This resulted in a cost saving of over £67,000 per year. I was awarded Company1 national student of the year award for this project having presented it to the CEO and board of directors. My design has now been implemented globally by company1.

## FURTHER WORK EXPERIENCE

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### **August - September 2017**

#### **Intern, company2 Race Engineering.**

- Worked within a highly experienced engineering team on the practical, hands-on maintenance of high-performance race cars. Gained extensive knowledge on design for manufacturing due to the company being reliant on custom machined parts for specialist cars.
- Practical work performed includes replacing suspension assembly on a March Ford 741, replacing the gearbox and clutch on an Alpha Romeo and extensive work on a Carrera GT.
- Aided in the logistical preparation for the team to travel to Spa-Francorchamps

### **September 2015**

#### **Intern, company3.**

- Responsible for analysis of live CAD models using Catia and producing briefing documents and presenting them over video call to the CAD design offices in India, this greatly improved my presentation ability and confidence.
- Used Teamcenter PLM in conjunction with Catia to manage assemblies and the subsequent parts
- I Identified numerous errors in CAD assemblies including a door seal and panel which had been missed by other analysis staff.

### **September 2015**

#### **Intern, company4 Engineering Solutions LTD.**

- Tasked to design and manufacture a dual Geneva mechanism. I used Creo to generate a parametric 3d model and ensure functionality through motion simulation.
- I produced engineering drawings for components and used a combination of manual and CNC manufacturing techniques to manufacture the mechanism

## AWARDS AND ACHIEVEMENTS

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- Awarded company1 national student of the year by company1
- Awarded an Arkwright Scholarship in 2014 and was sponsored by company5 Europe Ltd.
- A member of IMechE working towards chartership.
- Emergency first response first aid qualification (HSE accredited)
- BSAC Open Water Instructor, Dive Leader & PADI Rescue Diver
- Full clean driving/motorcycle license

## POSITIONS OF RESPONSIBILITY

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### **2017-Present**

#### **University Sub-Aqua Club Diving Officer, Lead Instructor & Vice-Chair**

As Diving officer, I act as a representative for the British Sub Aqua Club and ensure all training within the club (40+ people) is carried out to the required standard.

Furthermore, as Lead instructor I am responsible for organising the training schedule for the club which involves extensive people management and equipment logistics. I work extensively with large amounts of technical equipment and ensure it is maintained to the correct standard.

### **2015-2016**

#### **Cadet Colour Sergeant, Head of Army section, College CCF Contingent**

I was responsible for overseeing the numerous exercises conducted by the contingent over the year. This ranged from assisting in running a two-day leadership course in the Brecon Beacons to running a night exercise involving over 100 younger cadets.