

Benjamin Samuel

Telephone: 07549203406
Email: benjis135@hotmail.co.uk

Highly motivated and aspirational Aerospace Engineering graduate, looking to actively contribute in a fast-paced engineering environment. Solutions-driven and persistent in problem solving until desired outcome has been achieved to the highest possible standard. Has built an understanding of fundamental engineering concepts through various levels of academia, including the ability to use an analytical approach to formulate innovative solutions to technical problems.

Education

Aerospace Engineering BEng incl. Foundation year: September 2016 – June 2020, *University of Liverpool*;
Achieved grade: **First class honours**.

Modules included: Advanced engineering materials, Rotorcraft, Spaceflight, Programming, Dynamic Systems, Advanced modern management, Programming, Electromechanical systems, Avionics and Communication systems, Aircraft performance, Aerodynamics and Electromechanical systems.

Mechanical Engineering – BTEC Level 3 (90 credit): September 2015 – May 2016, *Plymouth City College*;
Merit Merit.

Modules included: Electro/Pneumatic and Hydraulic systems, Primary forming processes, Secondary processes and finishing techniques, Mechanical principles, Engineering drawing and Health and Safety.

Engineering Projects

Investigating radiation induced modifications in Zirconium Diboride – Final year individual project

- Winner of iMechE best project award.
- Able to demonstrate comprehensive understanding of fundamental concepts relating to material science and nuclear radiation in final report, awarded 88% for overall project.
- Project involved close collaboration with Dalton Nuclear Institute, 5 days of radiation testing was carried out to investigate microstructural changes in Zirconium Diboride after exposure to heavy ion irradiation.
- Contributed to optimisation of ion beam parameters to ensure that the desired damage profile was achieved.

Design Project – Light aircraft

- Aerodynamic and sizing parameters were optimized to ensure that aircraft exceeded customer and regulatory requirements.
- Advanced modelling and simulation tools successfully validated aircraft design.
- Deliverables for this project included a comprehensive technical report evaluating aircrafts performance against initial requirements, and an accurate CREO model of the aircraft.

3D CAD model of piston engine

- Individual project in which a fully interactive 3D model of a piston engine was created. This provided a solid foundation of essential tools and techniques relevant to the programme, with the task being completed to a high standard within a strict timeframe.

Virtual Liverpool waterfront construction project

- Working cohesively within a team of 6 engineering students, asked to devise a project plan for a given construction scenario in Liverpool.
- Successful in providing work breakdown structure and project scheduling (Gantt chart and Network diagrams included).
- Cost analysis and risk management regarding stakeholders was essential throughout.

Simulation of supersonic flow through convergent-divergent nozzle

- Successfully formed a technical model using ANSYS Fluent to simulate supersonic flow through a convergent-divergent nozzle.
- Completed a technical report comparing the results with 1D theory.

- Gained an understanding of how to successfully optimise design parameters to obtain the necessary simulated results.

Relevant Employment Experience

Erasmus Plus Engineering placement: February 2016, **MVV Energie, Mannheim, Germany**

- Collaborating closely with staff and students, working towards a final presentation to be delivered to key members of staff.
- Initial research stage allowed our multidisciplinary team to gain an in-depth understanding of the key processes involved with energy production. Following on from this, we were able to plan and deliver a presentation outlining the inner workings of the company to potential future employees.
- Gained invaluable experience within a multinational engineering workplace.

Work Experience Placement: February 2014, **Babcock International, Devonport, Plymouth**

- Opportunity to shadow a member of staff working within the marine engineering service department.
- Gained experience in dismantling and servicing of complex components used in the marine industry.

Other Experience and Achievements

Employment

September 2009-Present, Variety of part time roles including: Ice cream vendor (Willy's ice cream), Waiter (The Rock Inn), Labourer (landscape gardening) and retail assistant (White stuff).

Skills included:

- Assisting with production of ice cream and with the training of new members of staff. Position of responsibility assigned from management, due to good performance.
- Provision of high standards of customer service whilst sustaining optimum levels of proficiency within fast paced environment.

Achievements:

- Active member of both Tavistock and Lamerton Community football clubs, between ages of 6 and 21, acting as team captain on numerous occasions.
- Represented Tavistock College football club, appointed as team captain whilst on Paris sports tour. Responsible for development and implementation of pre-tour fitness regime.
- Member of student leadership team at Tavistock College.
- Volunteer for Alzheimer's society at Liverpool memory walk.

Additional Technical Skills:

- Competent in the use of Microsoft office suit, including Project.
- Experience in materials testing and analysis.
- CSCS site operative qualified.
- Proficient in MATLAB, ANSYS and CREO.
- Touch typist.

Professional Membership

- Student member of the Royal Aeronautical Society.