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JAMES L. GILCHRIST

Design Engineer

PROFILE

An industrious and experienced problem solver, I have been part of multiple engineering design teams at University, most recently project managing my masters group design project, which was awarded 1st place. I have a keen eye for innovation, balanced with a well practiced capability to deliver. At Rolls-Royce I implemented a £70,000 programme of reliability enhancement testing in under 10 weeks. I am looking for opportunities to apply my engineering skills at an innovative product design consultancy.

EDUCATION

UNIVERSITY OF BRISTOL, 2011-2015

Masters Degree: Aerospace Engineering, first-class honours

- ▶ **Masters Design Project:** Project managed an 8 person team to design a multirole 1,000kg UAV rotorcraft. I led the concept generation process to deliver a well defined design from a 30-page brief and personally designed the avionics and electrical systems. Augusta Westland, the units sponsor, awarded our design 1st place.
- ▶ **Masters Research Project:** Investigated and modelled the effect of NOx emissions from aircraft. I proposed optimal trajectories to reduce the overall global warming impact of flight. Creative and lateral thinking were essential to this project to generate and model potential solutions.
- ▶ **Composite Design and Manufacture:** Designed a 1.5m composite wing to achieve weight, strength and stiffness targets. I proposed a full manufacture plan including tooling design, material utilisation, tolerances, assembly, costing and quality assurance.
- ▶ **Other Notable Projects:** Designed and manufactured a full length aluminium UAV wing using CAD as a modelling tool. Developed a genetic algorithm based optimiser from the ground up, to propose an airline's fleet and route assignments. Created a detailed business plan for a crowd-powered cycle courier company.

DAVENANT FOUNDATION SCHOOL, 2004-2011

A Levels: Mathematics: A, Economics: A, Physics: A*

EXPERIENCE

PRODUCT DESIGN ENGINEER, FREELANCE LONDON, FEB 2016 - CURRENT

- ▶ Developing a packaging range for a client in the FMCG industry. This involves undertaking detailed user research and delivering an innovative and thorough packaging and manufacturing strategy across a range of food products.

- ▶ The role also involves coordinating branding and graphic design to address the user needs identified. I took this role to expose myself to other elements in the design process, enabling me to become a better Design Engineer.

DESIGN ENGINEER, ROLLS-ROYCE BRISTOL, SUMMER 2014

- ▶ A 10 week placement, working on the TP400 turboprop engine’s sensors.
- ▶ I implemented a £70,000 programme of Reliability Enhancement Testing (RET) for 6 of the engine’s crucial sensors, being directly accountable to the Chief Engineer.
- ▶ This involved selecting the units, designing the test programmes, liaising with suppliers and ensuring all the tasks were delivered on time.
- ▶ The placement also allowed me to broaden my technical presentation skills, which resulted in me leading important meetings with the Chief Engineer and numerous suppliers.

COMMITTEE MEMBER, BRISTOL BARRACUDA BRISTOL, 2012-2015

- ▶ Bristol Barracuda is the university of Bristol’s American Football team. I stood for committee at my first opportunity and I was elected as Community Relations Officer.
- ▶ The role involved planning and running charity events, coaching children and young adults, as well as handling all of the club’s involvement within the community. I organised a charity Liftathon which raised over £1000 for charity. I then spent the next year as Web and Media Officer.
- ▶ In my last year of university I was elected as the club secretary, a key position in the leadership of the 100+ member club.
- ▶ I was a key part of leading the committee in their day to day responsibilities and focused on implementing a strategy for the long-term growth and development of the club.

ACHIEVEMENTS

- ▶ I have a good level of experience in public speaking and leadership; I won a public speaking contest in 2008 and I represented my school at a regional level.
- ▶ At school I was elected as vice president of Davenant International, an organisation devoted to learning about foreign cultures and political issues. I delivered presentations, and organised events and trips, such as a visit to the Houses of Parliament.
- ▶ At University I was awarded full colours, the highest award for sporting achievement. In 2014 I was also awarded the Bristol Barracuda Defensive M.V.P (Most Valuable Player) and Player’s Player - voted for by the team.

TECHNICAL SKILLS

Very Experienced:

- ▶ Matlab
- ▶ Microsoft Office

Experienced:

- ▶ AutoCAD
- ▶ Adobe Photoshop

Some Experience:

- ▶ Finite Element Analysis
- ▶ HTML + CSS

REFERENCES AVAILABLE UPON REQUEST