James Philbrick

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Summary

I am a technically minded mechanical engineering graduate who enjoys problem solving, learning, and being generally creative.

Key Skills

- Well versed in a variety of ICT and technological skills:
  - CAD (mainly Fusion 360 and SOLIDWORKS) including respective FEA simulation tools,
  - Programming with MATLAB and Python,
  - Experience with integrated systems; usage of Arduino and MBED with serial communication,
  - Proficient with Office 365 including Excel and experience with Power Automate,
  - Data processing and visualisation using Python.
- Clear, concise, and professional communication skills; both written and verbal.
- Effective relationship-building and social skills, with a friendly and professional poise.
- Self-motivated with good time-management skills and responsibility to reliably meet deadlines.
- Experience working in a team to maximise group understanding and effectiveness.

Experience

The Software Institute | Liberty Global (Sept 2022 – Nov 2023)

- Worked as a graduate technical consultant, specialising in Oracle ERP business software. I liaised with external business representatives to define, build, and test additions and alterations to business software environments. I was actively involved in a variety of large scale projects with range of external public sector clients.

B&Q Lincoln (June 2021 – June 2022)

- Worked as a Customer Advisor to aid customers in making project decisions whilst building and maintaining good customer experience. Required to safely work with industrial machinery and warehouse vehicles.

Other experiences

- A year-long team project to design and present a novel agricultural energy-generation solution – I worked as part of a group to develop a fully researched and designed biogas generation solution targeted at dairy farmers. I helped to define objectives and mange team direction, design processes, economic feasibility calculations, and documentation through the full project lifecycle. Our work was then presented to, and critically reviewed by, active industry professionals. Gained experience in engineering documentation processes and analyses such as DFMEA, QFD, SWOT, etc.

- CATCH industry training and preparation course – gained a thorough familiarity with health and safety practices and precautions within an industrial context.
- Hands-on experience designing and creating various personal projects covering both hardware and software domains.

Education

University of Lincoln (2018 –2022)

BEng (Hons) Mechanical Engineering – Achieved first-class honours. Below are a sample of the modules I covered:

- CAD and Technical Drawing
- New and Sustainable Product Design
- Industrial Engineering
- Electrical Power and Machines

Boston Grammar School (2016 – 2018)

A-levels:

- Computer Science
- Physics B (Advancing Physics)
- Mathematics

Additional AS-level:

- Biology

Qualifications

- SOLIDWORKS CAD Fundamentals | View certificate
- The Engineering of Structures All Around Us | View certificate
- BCS Foundation Certificate in Business Analysis V4.0 | View certificate

Projects

I have gained a multitude of technical skills through completing a variety of extra-curricular projects, fuelled by self-interest:

- **Variety of 3D printing projects** – experience maintaining tolerance requirements and designing structurally performant parts from real-word measurements. Have utilised custom gcode to convert my printer into a 2d plotter.
- **ROS robot arm simulation** – simulated the use of a Niryo One robot arm in rvis to carry out a box-stacking task. I underwent the process of building and refining the program logic before deploying and testing, whilst creating detailed documentation to help my own understanding as well as that of my team members. I refined my understanding of Linux and its terminal usage.
- **ISS tracker** – obtained and physically pointed to the position of the ISS in real time with a desktop stepper motor pointer and serial communication.
- **Lithophane generator** – Wrote a program to procedurally generate STL files to generate 3D-printed lithophanes using custom mesh generation routines.