

JACK DAVIES

MECHANICAL DESIGN ENGINEER

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PERSONAL STATEMENT

I have a deep rooted interest in new technologies and innovations within the design and technology industry. My recent work at Etergo has enabled me to rapidly progress my skills in a wide range of engineering disciplines as well as gain a wide range of business and project management knowledge.

My interest in product design & engineering began at a young age; I have always been intrigued by how things work, and I am always taking things apart. This passion has remained and I have gained an extensive amount of engineering experience by designing and building a range of products both professionally and in my spare time, specifically electric vehicles.

I am highly motivated and love working with others to achieve a common goal. I embrace change to facilitate better ideas and find solutions to problems.

EDUCATION

- BSC (HONS) PRODUCT DESIGN**
NOTTINGHAM TRENT UNIVERSITY
Graduated with First-Class Honours.
BSc course involving a varied program of study, including a strong basis on manufacturing and functional engineering product design.
Experience of live projects from industry set briefs, and working in teams to deliver professional projects.
- DIPLOMA IN PROFESSIONAL PRACTICE**
NOTTINGHAM TRENT UNIVERSITY
Awarded for completion of a year long placement in industry during my degree course.
- A LEVELS**
CHESLYN HAY HIGH SCHOOL
Product Design
Business
Art & Design
Media Studies

WORK EXPERIENCE

- ETERGO**
Mechanical Design Engineer - Electric Scooter Hardware
Involved in the entire engineering cycle for the production AppScooter. Part owner of 12 highly integrated parts from concept stage to final engineering and supplier communication. Detailed knowledge of many manufacturing processes and DFM, specifically injection moulding, metal stamping, sheet metal and machined parts. Assisted with development of many other parts of the scooter and high level of collaboration with electrical, software and manufacturing teams.
December 2018 - Present
- AUTODESK**
Mechanical Design Engineer - Fusion 360 Specialist
Technical CAD work using Fusion 360 involving a range of projects, mainly focusing on concept automotive designs, and a wide range of manufacturing process optimisation.
October 2017 - December 2018
- 3D HUBS**
Design Engineer - 3D Printing Expert
I worked in many areas including single handedly executing a project with HP to design and manufacture a 3D printed electric skateboard. Technical customer support, company CAD training, writing technical articles, a book chapter on reverse engineering and many other projects.
October 2016 - August 2017
- UNDERGROUND ENGINEERING**
Founder & Engineer
Engineering company that I started for personal projects and consulting work. Projects mainly involve product prototypes, manufacturing machinery design and electric transportation products.
July 2015 - Present

KEY SKILLS

CAD	● ● ● ● ● ● ● ●
MANUFACTURE	● ● ● ● ● ● ● ●
DESIGN ANALYSIS	● ● ● ● ● ● ● ●
DOCUMENTATION	● ● ● ● ● ● ● ●
ELECTRONICS	● ● ● ● ● ● ● ●

ABILITIES

- Certified Mechanical Design Associate (C-BAVAGRY7TA) in Solidworks, experience including FEA, plastic mould design & sheet metal as well as A surfacing, part and assembly modelling. Also a high level of expertise in Fusion 360, Inventor, AutoCad, Keyshot & Adobe CC.
- Electronic engineering skills and expertise in Eagle CAD and Altium Designer with PCB layout and schematic design. Experience with micro controllers, especially Arduino, ESP32.
- I have always had a deep rooted interest in electric vehicle technology and have completed a wide range of EV projects, including many Li-ion battery pack builds, drivetrain and system architecture design.
- Strong interest in making and building. I have completed many personal projects including scratch built 3D printers, CNC router, injection moulding machine, racing drones and electric bikes and skateboards. See my website for examples of my work at jackdavies.co
- Experience operating industrial machinery including Haas CNC machines, manual and CNC lathes and mills, FLOW water-jet and plasma cutters as well as injection moulding and tool design.
- Experience of rapid prototyping and 3D printing technologies, including design of 3D printer hardware and operation of a professional print lab and workshop.