

ROWAN



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TOWNSEND



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PROFILE

Resolute and hardworking, I have achieved all A*'s in my A levels; physics, mathematics, and further mathematics. I also achieved the highest result of an A in AS chemistry. This opportunity has me looking forward to a challenging learning curve which will jumpstart my career. With this I wish to develop key skills to become an integral part of the team which constructs the sustainable aerospace sector of the future.

CORE SKILLS

- **Leadership:** I was the nominated speaker and leader for my Engineering Education Scheme Wales (EESW) group project, having to present and explain our project to the rest of the engineering summit. Alongside that, my job as a lifeguard requires me to be proficient in my ability to lead and act when necessary.
- **Teamwork and Communication:** As a part of many group projects and teams (M3 Maths Challenge, EESW Scheme, Welsh Triathlon Academy, and more) the more effective our communication, the better the result, which I have found through experience and learning.
- **Organisation and Time Management:** Being a part of the Welsh Triathlon team, I need to optimise my time to ensure that I can compete at the highest level, still achieve target grades in school, and maintain my lifeguard responsibilities.
- **Problem Solving:** Through completing Senior Maths Challenges, M3 Maths Challenge and more, I am used to changing my perspective on problems and approaching them from all angles.
- **Design Software:** Proficient in using SketchUp and CAD whilst applying this to printing 3D models in numerous different materials according to their uses, e.g. TPU for screw head holders.
- **Coding:** I can code in python 3 and can work on projects which require prior coding knowledge or new code to complete.
- **Welding:** I have experience with MIG welding during personal projects, and I am currently working on my TIG welding skills.
- **Mechanical Knowledge:** I have a passion for how things work, and as a result have taken apart and rebuilt many different mechanical and electrical machines over the years, most notably bicycles. This has given me a deep understanding of how the basics of mechanical design and engineering work, alongside hands-on experience.

EXPERIENCE

- Gold CREST award winner for my self-directed engineering project based on electricians' wearables with C.K Tools where I created a tool vest and recycled power pack for daily use.
- Competent with manufacturing tools e.g., belt sanders, vertical bandsaws, chainsaws, log splitters, 3D printers etc., and the use of these for independent projects such as adding modifications to my mountain bike.
- Site visits to engineering focused campuses; Wylfa nuclear power station, Coleg Menai engineering labs, Liverpool University Science Departments, whilst completing hands on research and introductions into the way these sites are run.
- Able to deal with customer complaints and communicate in difficult environments during my lifeguard duties.
- Able to thrive in high pressure situations as I am used to the responsibility undertaken when simultaneously lifeguarding, competing for Wales, and achieving the highest standards in school.

EDUCATION

- **St Gerards School Trust** | 2021-2023
 - Mathematics | A* | WJEC
 - Mathematics Numeracy | A* | WJEC
 - Biology | A* | WJEC
 - Chemistry | A* | WJEC
 - Physics | A* | WJEC
 - Physical Education | A* | WJEC
 - English Language | A* | WJEC
 - English Literature | A* | WJEC
 - Art, Craft and Design | A | WJEC
 - Geography | 8 | AQA
- **Ysgol Friars** | 2023-2025
 - AS Mathematics | A | WJEC
 - AS Further Mathematics | A | WJEC
 - AS Physics | A | WJEC
 - AS Chemistry | A | WJEC
 - A-Level Mathematics | A* | WJEC
 - A-Level Further Mathematics | A* | WJEC
 - A-Level Physics | A* | WJEC

My Gap Year 2025/2026

Over this time since my A – Levels have concluded, I decided to take a gap year as I felt I needed more experience in sector of work which I expect to be entering (engineering). Therefore, over this gap year I will be attending work experiences with local companies based in the UK and North Wales, (Paramount Waste, IAQ engineering, etc.) alongside working on personal projects which I want to pursue to solidify my choice of work before I fully commit. I also felt as though my personal development so far has been very one dimensional and based on education. To combat this, I will be doing volunteering work abroad in either Raleigh international or during Camp Canada/America. This will help to develop my teamwork, cultural appreciation and multifaceted skillset. I think this will make me a more well-rounded individual equipped to thrive in the workplace.

Current Projects

- Working on rebuilding a motorcycle from disrepair due to lack of use, combining my mechanical engineering knowledge, practical abilities and research into one project.
- Restoring old and battered mountain bikes to their primes, keeping my skills sharp and being able to flip them for profit.
- I am constantly developing my welding skills on old metalwork, and am currently learning how to TIG weld, since it is much harder than MIG.
- Stripping a small car engine apart to gain a deeper understanding of its internals, and to see if I can attempt to fix/diagnose issues with it.

ADDITIONAL INFORMATION

- Welsh Triathlon Academy Member | 2022 – 2025
- Lifeguard at Bangor pool | 2024 – present
- RAF background, having grown up with complex engineering systems constantly surrounding me.
- Enthusiastic about physics, attending further lessons outside of school hours and supplementing my knowledge with books such as 'Quantum' by Manjit Kumar, 'Special Relativity and Classical Field Theory' by Leonard Susskind, and 'The Tao of Physics' by Fritjof Capra. I am also an avid listener of podcasts such as 'The Infinite Monkey Cage' and am keenly interested in videos by the likes of Veritasium, Alpha Phoenix and FloatHeadPhysics.