

NAYEEM SULTAN

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EDUCATION

University of Bath, MEng Aerospace Engineering (September 2025 – May 2029)

Predicted 2:1 (61% Average)

Year 1 Modules

Design, Materials & Manufacturing	65%	Thermofluids	57%
Mechatronics	57%	Solid Mechanics	53%

Broughton High School, Advanced Higher (August 2023 – May 2025)

- Achieved AAA in Physics, Mathematics, Mathematics of Mechanics.

ENGINEERING PROJECTS & EXPERIENCE

University of Bath, Bath Experimental Rocketry Team – Injector Development and Testing (March 2026 – Present)

- Researched various injector methods to achieve perfect atomisation in a liquid-liquid rocket engine, using Ethanol and LOX.
- Designing a Coaxial Swirl Injector in collaboration with team members, utilising CFD (Ansys Fluent), NASA CEA and CAD (Autodesk Inventor), to produce a suitable model before testing.
- Fine-tuned the injector through data analysis using Excel to determine the optimal cone angle spread and dimensions.
- Spray cone results came within 2% of theoretical predictions using simulations.

University of Bath, Team Bath Roving – Chassis Propulsion (February 2026 – Present)

- Explored tread shapes and designed wheels with V shaped grouser designs for the rover in the UKSEDS Olympus Rover Trials (ORT) competition.
- Coordinated with other teams to implement screw holes and fit parts together.
- Assembled the rover for final submission through a Fusion 360 Hub.

University of Bath, Bath Hydrobotics – Actuation Team (October 2025 – February 2026)

- Compared electric, pneumatic and servo – based actuation systems through research.
- Prototyped a 3D-printed linear actuating gripping arm.
- Explored end-effector designs for gripping arm.

BAE Systems, Work Experience (November 2023)

- Undertook a weeklong course to design a UAV for humanitarian aid.
- Collaborated with members that concluded into a 'B2 Spirit' fixed wing idea for the UAV.
- Adapted to deadline cuts and reiterated UAV under different brief changes.
- Presented UAV to engineers at BAE Systems.

Personal Project – Air Duster (March 2026 – Present)

- Creating motor control circuit using a 12V computer fan, MOSFET, potentiometer and battery to make an air duster.
- Investigated various nozzle shapes and designs to achieve optimal air flow.

COMPUTING SKILLS

Microsoft Office and LaTeX

- Experienced with using Excel for data analysis, MS Word for drafts and short text and PowerPoint for presentations. LaTeX is used for large text and report writing.

3D CAD Software, MATLAB, HTML, CSS, JavaScript, C++

- **Autodesk Inventor** – Taught in High School at 14 years old. Used to design UAV and the actuator gripper, as well as a planetary gearbox and table tennis ball launcher for the university curriculum.
- **Autodesk Fusion 360** – Used in Team Bath Roving and personal projects.
- **MATLAB** – Investigated and calibrated an ultrasonic sensor by coding and using data analysis. Used the software to calculate the tension of a belt drive at specific angles, determine various material properties and investigate the characteristics of an air jet under different distances.
- **HTML, CSS, JavaScript** – Learnt to create a personal website to express interests and document my engineering journey.
- **(C++)** – Currently learning as an alternative to MATLAB for programming Arduino, ESP32 and other micro-controllers.
- **Ansys Fluent** – Used to assist in designing the Coaxial Swirl Injector.

WORK EXPERIENCE

Tesco Express Colleague (October 2025 – Present)

- Undergone Step-Up training to acquire greater responsibilities and be able to run a Tesco Express store as a shift leader. This was achieved due to exceptional teamwork and communication skills, as well as resilience and hard work.
- I compare store analytics to achieve maximum customer satisfaction and maximise profits. I also delegate tasks to achieve goals in a tight schedule.
- Employed as one of the first employees for Ocean Terminal Tesco Express. Helped to plan stock on shelves, opening the shop.
- Guided tourists with navigation for the historical site of the Royal Yacht Britannia

Christmas Tesco Colleague (October 2024 – January 2025)

- Restocked shelves, carried out reductions and offered exceptional customer support in both the Fruit & Veg and Dairy sections during busy Christmas times
- Supported colleagues when staff numbers were low and handled stock for departments alone during the Christmas rush.

ACTIVITIES & INTERESTS

Badminton and Gym

I consistently play badminton weekly with friends as part of the Bath Badminton Society. I also regularly go to the gym for bodybuilding training to improve my self-esteem and my health. My greatest achievement is deadlifting 2.1x my bodyweight.

3D Printing and Tech Repair

I love 3D printing parts or devices for my everyday life, as well as repairing existing tech. For the air duster project, I prototyped multiple 3D-printed nozzles, brackets and bodies. I have also repaired headphones, consoles and conducted battery repairs on my old phones to extend their lifespan, such as my old Samsung S10 which has been converted into an emulation console and storage.