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Bríain Doyle

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EDUCATION

Glasnevin, Dublin   **Dublin City University**   **2021 | Present**

- MEng/BEng in Mechatronic Engineering
- Certified SolidWorks Associate (CSWA)

WORK EXPERIENCE

Maths & Applied Maths Tutor   **KR Tutoring**   **October 2025 - Present**

- Explain complex mathematical concepts clearly, using real-world examples and problem-solving strategies.
- Communicate effectively with students (and parents where relevant) to support learning goals.
- Track student progress and adjust teaching methods to strengthen weaker areas.

Engineering Intern   **Pfizer Newbridge**   **April 2024 – December 2024**

- Gained firsthand experience across multiple engineering sectors, collaborating with the Engineering Systems, Maintenance, Utilities, Packaging, and Continuous Improvement teams.
- Led the integration of 3D printing at the site through continuous improvement projects, vendor engagement, and management presentations.
- Coordinated external contractors and site utilities to ensure the safe and efficient removal of redundant infrastructure.
- Assisted in the weekly organisation of preventative maintenance schedules and purchase orders.
- Supported FMEA reviews to identify and mitigate potential equipment and process risks on packaging lines.

Store Supervisor   **Centra**   **April 2022 – April 2024**

- Led the team to maintain high operational standards and customer satisfaction.
- Fostered a positive team atmosphere through mentorship and delegation.
- Handled cash management, balanced tills, and completed shop closing procedures with accuracy and accountability.

TECHNICAL SKILLS

- **Mechanical Design:** Proficient in SolidWorks for 3D modelling, simulation, and design for manufacture.
- **Electronics & PCB Design:** Skilled in KiCad for schematic capture, circuit layout, and prototyping.
- **Programming:** Experienced with Arduino, MATLAB, C/C++, and Python.
- **Additive Manufacturing:** Well-versed in FDM 3D printing for prototyping and functional product applications.

PERSONAL SKILLS

- **Leadership:** Skilled at guiding and motivating teams in both workplace and sporting settings, achieving goals through collaboration and accountability.
- **Communication:** Clear and confident communicator, effective at presenting technical concepts and engaging with diverse audiences.
- **Problem-Solving:** Analytical and creative thinker with a practical approach to resolving challenges in engineering and project environments.
- **Organisation:** Highly organised in managing time, projects, and documentation to maintain accuracy and meet deadlines.

PROJECTS

Personal   **DIY Quadcopter**   **Ongoing**

Description: Designing a fully custom FPV quadcopter incorporating self-designed electronics, 3D-printed structural components, and embedded control and communication systems.

Skills Learned: Circuit and PCB design (KiCad), solid modelling and design for manufacture (SolidWorks), 3D printing and prototyping, embedded programming (Arduino IDE), PID control, radio integration (nRF), and system testing and troubleshooting.

Master's Thesis   **High-Speed PCR for LoaD**   **Ongoing**

Description: Engineering a cost-effective and reliable method for performing Polymerase Chain Reaction (PCR) within the Lab-on-a-Disc (LoaD) platform. Work involves optimising heating elements, disc design, and custom electronics while conducting thermodynamic and microfluidic flow analyses, testing, and troubleshooting.

Skills Learned: Academic research, technical writing and presentation (Word/PowerPoint), design for manufacture (SolidWorks), circuit and PCB design (KiCad), engineering calculations (Excel), experimental testing and data analysis, microfluidics, and thermodynamics.

College   **Firefighter**   **Completed**

Description: Designed a pneumatically controlled robot to climb a ladder while carrying water, featuring a single-actuator mechanism and electrical limit switch control to meet customer design requirements.

Skills Learned: Product design, teamwork, customer presentation, pneumatics, switches and latches, solid modelling (SolidWorks), and project documentation (Word/Video editing).