MATTHEW BYRNE

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PROFILE

Results-driven software developer seeking contract or project-based opportunities. Motivated by impactful work and committed to continuous learning and improvement. Proven track record of delivering successful, client-aligned solutions. Experienced in working independently as well as contributing to larger teams. Strong communication skills and a focus on providing exceptional client support. Skilled at driving innovation in both mature systems and green-field projects.

EDUCATION

MSc. in Artificial Intelligence — Munster Technological University — Ongoing, Expected 2027
Certificate in Secure Software Development — Munster Technological University — 2023 - 2024
BSc. in Software Development — Munster Technological University — 2019 - 2023

SKILLS

Languages & Markup	JS/TS, Python, Java, C#, PHP, HTML/CSS
Frontend Technologies	React, Angular, Bootstrap.
Backend Technologies	Express, Spring, Laravel.
Soft Skills	Self-starter, results driven, detail orientated, clear & empathetic communicator.

EXPERIENCE

Full Stack Software Developer — Jan 2022 - June 2025
Nimbus Research & Development Centre — *Hybrid. Cork, IE*

- Reduced manual inspection time at PepsiCo by 60% by developing a computer vision QA system.
- Led development of a cloud-based food safety tracing platform resulting in a major reduction in compliance faults.
- Developed a QR code-based schematic validation system that enabled real-time drawing version checks.

PROJECTS

PackLIMS — Participated as a core member of the team developing a machine learning-driven computer vision system adopted by PepsiCo that automated quality assurance on the bottling line by detecting underfilled or defective bottles in real time. Leveraged Python and OpenCV to train and deploy models integrated with high-speed industrial cameras, resulting in a 60% reduction in manual inspection time and significantly improving throughput and consistency across production. (Read more)

HACCPFlow — Led the development of a Laravel-based platform for tracking food safety data from kitchen supplier to plate, integrating with third-party API-connected thermometer sensors to enable real-time monitoring of food storage and preparation conditions. Collaborated directly with clients through weekly consultations to deliver tailored features, resulting in a notable reduction in compliance faults and significantly improving daily operations for kitchen staff.

Drawing Validation System — Led the development of a proprietary software tool to enhance version control and traceability across projects in an electrical engineering firm. Built using React and Firebase, the system allows engineers and architects to generate QR codes linked to live validation pages for technical drawings. Field teams can instantly verify whether printed plans are current, significantly reducing the risk of using outdated documentation on-site.

Secure File Upload & Access Control System — Created a secure file upload and access control system using Node.js, Express, and MongoDB. Critical focus on implementing OWASP best practices, including RBAC, CSRF protection, session management, and AES-256 encryption. The system allowed privileged users to view upload metadata via an admin panel, while maintaining strict access control and data validation for nonprivileged users.

HOBBIES & ACTIVITIES

- Mentoring & Peer Support – Informally mentoring student and aspiring developers in best coding practices & application design.
- Lifelong learner – Actively pursuing a master's degree in Artificial Intelligence, with a particular interest in autonomous vehicles.
- DIY Electronics & Embedded Projects – Hardware projects involving microcontrollers, sensors, and home automation systems.
- Motorsport Enthusiast – Active supporter and participant in motorsport events, with an special interest in vehicle telemetry & data analysis.