Oisin McNicholl

Limavady, United Kingdom | oisinmcnicholl4@gmail.com | full UK Driving License
GitHub: https://github.com/omcn | Website: https://forkmyfeelings.com/ | LinkedIn: omcn100

Profile

Computer Science undergraduate at Queen's University Belfast seeking placement with a strong foundation in programming and full-stack development. Skilled in building interactive applications and solving real-world problems. I am a competitive swimmer who is used to high-pressure environments, and I am eager to contribute to innovative technical teams and continuously develop my professional skills.

Education

Queen's University Belfast — BSc Computer Science (2023 – 2027) | Currently on a 2:1 as of 2nd year exams June 9th 2025.
Level 2 Relevant Modules: Software Engineering (73%), Data Structures and Algorithms (63%), Professional Skills (68%)
Level 1 Relevant Modules: Cybersecurity (80%)
A Levels (2023): Technology and Design (B), Software Systems Development (B), Physics (C)
AS Levels (2022): Technology and Design (A), Software Systems Development (A), Physics (B)

Technical skills

Front End Languages: HTML, CSS, JavaScript, React (Next.js).

Back End Languages: Java, C#, SQL, C++, Python, Arduino, Node.js.

Applications: Eclipse, MySQL Server, MS Visual Studio (2019-2023), MS Visual Studio Code, Supabase, GitHub, GitLab, Anaconda, Jupyter Notebook, Pycharm, IntelliJ, Arduino IDE, Vercel.
Certificates of completion: Java Masterclass by Tim Buchalka (Udemy) | C# crash course by Tim Buchalka | Learn to create Jarvis AI with Python by Arbaz Khan (Udemy)

Projects

Fork my Feelings - full stack Mood Based recipe suggestion Mobile app (work in progress):
- Built with React (Next.js), Supabase, and Google Maps API for recipe and restaurant suggestions based on user mood.
- Integrated emoji-based UI with Framer Motion, camera capture (WebRTC), and ingredient pricing.
- Developed full CRUD functionality, real-time post feed, and dynamic grocery lists.
- Integrated Supabase to handle user authentication, image storage, and database management; wrote SQL queries to store and retrieve recipe data, user posts, and star ratings.
- Integrated Unit Testing and simulation scripts to test the algorithm performs as expected.
- Independently solved integration issues with Supabase and API keys, demonstrating strong problem-solving under pressure in addition to the various errors that arose during development of a personal project.
- Implemented Row Level Security (RLS) and email verification in Supabase to ensure secure, user-specific data access.

Software Engineering project - Level 2:
- Designed a Monopoly-inspired game with a unique theme and made it playable through the Eclipse Platform.
- Conducted a software engineering game project emphasising requirements analysis, system design, software implementation and system testing to deliver reliable and suitable functionality.
- Collaborated in a 5-person team using GitLab, clearly communicating updates and ensuring integration without conflict.

AI Coursework – Level 2 project:
- Developed a binary image classification dataset and engineered 16 custom image features using NumPy and SciPy.
- Applied statistical analysis (t-tests, correlation matrices) and built logistic and linear regression models to evaluate feature effectiveness.
- Built and evaluated classification models (Logistic Regression, k-NN, Random Forests) using engineered image features.

Unity Game - Multi-Genre Adventure:
- Designed a 3-level Unity game (Turn-Based, Survival, Platformer) featuring mesh AI, energy systems, and state-driven enemies.
- Programmed custom enemy behaviours and mechanics using C#.

Arduino Reaction Game - A-Level Tech Project:
- Designed and soldered a custom copper circuit board for a reaction game.
- Self-taught Arduino (C++) to control gameplay; selected by CCEA as exemplar coursework.
- Authored 20-page technical report documenting the full design and development process.

Work/Volunteering experience

- **Full lifeguard training and certification**: I learned critical skills such as in-depth CPR, essential first aid and the various saves required such as suspected spinal injuries during training, where I acted as both lead and assisting lifeguard, maintained verbal contact with the casualty, coordinated timing with teammates to secure the head, slide the spinal board underneath in the water, and safely lift the casualty onto poolside requiring precise communication, role clarity, and calm coordination.
- **Experience day at Seagate:** Tasked with challenges such as a deductive reasoning challenge putting people in order with limited information, I lead my group to first place requiring the least number of hints and finishing the challenge in the smallest amount of time.
- **Experience day at Bentley**: Gained insight into the company, learned about innovation and workflow in a world-class engineering environment through structured briefings and demonstrations.
- **Appointed health and safety officer of QUB Surf Club**: Collaborated closely with my fellow committee members, attending meetings, performing risk assessments, communicating safety protocols, staying sober to act as the first point of contact, and coordinating responses during incidents, requiring clear communication, leadership, and a proactive mindset.
- **Appointed Team Captain of my swimming club**: Attended junior swimming galas ensuring all junior swimmers were organized, comfortable and motivated, providing tips and volunteer timekeeping to ensure the gala ran smoothly.

Achievements/ Experience

- I was the highest achiever in Software Systems Development and Technology & Design (I received an award for achieving the highest grade in both subjects at my school), and I also received the Best project award in both subjects.
- Taught myself the SSD syllabus after teacher absence, achieving the top mark at my school—evidence of adaptability and self-drive.
- Swimmer of the Year (based on my achievements made over a season achieving national finals while maintaining a 5:30 AM training schedule and balancing my academic commitments with personal software projects).

Extra-Curricular

QUB Clubs: QUB Surfing, QUB Swimming, QUUB Snowsports, Queens Computing society QUB Muay Thai.