

Daniel Mackle

Year 2 Computer Science Student, Queen's University Belfast

Contact

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UK&I Early Careers TA Team
Kainos Software
4-6 Upper Crescent,
Belfast, Co. Antrim
BT7 1NT

Dear Sir or Madam,

Thank you very much for helping me choose Kainos as a potential employer through your Early Careers Team's lovely events and talks across Queen's University Belfast!

I am now pursuing this position of Placement Software Engineer in Belfast for June 2025. Please find attached my CV.

I am confident that my following qualities make me an excellent fit for this prestigious role:

- Evidenced soft skills of Creativity, Communication and Determination in a Cooperative environment.
- Refined roster of Technical Skills.
- Academic Excellence.
- Ongoing volunteer work as a public speaker for CyberFirst and ChildNet, on the topic of Cybersecurity.
- Strong repertoire of varied job experiences.
- Participation in public Hackathons, challenges and events.
- Many personal and academic projects of high standard.

I first learned of this amazing opportunity through both the QUB MyFuture portal, and in-person events.

Thank you very much for taking the time to review my CV. I hope to meet you again in the next stages of the application process!

Yours faithfully,

Daniel Mackle.

CONTACT

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UK/Irish Citizen

<https://linktr.ee/danmackle>
(Contains GitHub, LinkedIn, Indeed)

<http://www.linkedin.com/in/danielmackle>

TECHNICAL SKILLS

Coding languages: C#, C++, XML, WPF, HTML, CSS, Java, TypeScript, Python, BASIC, QBASIC, MySQL, SQLServer, Oracle, ARM and ARMLite.

Technical Software: Microsoft Visual Studio, WinForms, Microsoft Visual Studio Code, Eclipse, Notepad++, Replit, Pycharm, Webstorm, CLion, DataGrip, PHPMyAdmin.

Microsoft Office Master in Word and Excel, Microsoft Office Specialist in Word, Excel and PowerPoint.

Educated in UML, Project Timetabling Techniques, the Software Development Lifecycle and the manifestos of common business Methodologies.

UNIVERSITY EDUCATION

Master of Engineering: Computer Science incl. Professional Experience
09/2023 - 06/2028 (Current)

Queen's University Belfast - Belfast
(To-Date Average of 83%)

- Computer Science Challenges (71%)
- Intro. to Computer Architecture (90%)
- Introduction to Cyber Security (88%)
- Object Orientated Programming (85%)
- Fund. of Maths for Computing (82%)
- Databases (79%)
- Systems Security and Cryptography (TBA)
- Software Engineering and Systems (TBA)
- Data Structures and Algorithms (TBA)
- Theory of Computation (TBA)
- Professional & Transfer Skills (TBA)

Daniel Mackle

PROFESSIONAL SUMMARY

Determined, honest and enthusiastic programmer, currently in my second year of study of Computer Science in Queen’s University Belfast.

For three years, I have been giving presentations and talks in secondary schools, universities and computing events in Belfast, representing CyberFirst and ChildNet, now partnered with Queen’s University Belfast. I am passionate to impact and inspire the future generation of computer scientists.

I have also participated in many events, meetings and challenges to get further immersed into computing in Belfast, such as Kainos Lunch and Learn, and the Kainos CodeCamps. Through these, I have been able to build my awareness alongside my skills of coding, teamwork, confidence and networking.

I am a strong co-operator, both casually and in group Hackathons to build creative and exciting projects, every one an attempt to further my skills, my field and to give back to the world around me.

WORK HISTORY

Machine Operator 05/2024 - 09/2024
Beverage Plastics - Lurgan, Co. Armagh

- For over 4 months, I worked a full-time, 12 day/night shift factory job, in a local bottle-blowing factory.
- Effectively operate heavy machinery, which included identifying, planning and solving the plethora of errors the million-pound machines may experience.

Kainos CodeCamp 01/2024 - 01/2024
Kainos – Belfast, Co. Antrim

- Collaborated in large groups of 10-15 developers to develop fun solutions to real-world issues, using a new coding language that I had not at that point used before, Typescript.
- Gained experience in using the web-based IDE Replit, alongside learning how Kainos manages and builds on huge repositories with Git.

Allstate Insight Programme 04/2024 - 04/2024
Allstate NI – Belfast, Co. Antrim

- Learned first-hand about the company's internal guidelines and techniques on the topics of: Software Development, AI Development, Cyber Security, Data Science and Software Testing.
- Collaborated in groups to identify and plan solutions to relevant scenarios and problems affecting the Software Development and Cyber Security industries.

PREVIOUS EDUCATION

A-Levels/GCSEs, 09/2023 - 04/2028

Banbridge Academy –

Banbridge, Northern Ireland

- Software Systems Development (A*)
- Physics (A)
- Biology (A*)

Additional AS Level:

- French (C)

10 GCSEs including Further Maths (A*), English Language (B) and Software Systems Development (A*).

Grade 8 & Performance Diploma:

Speech and Drama, 09/2013 - 04/2022

London College of Music Examination

SELF-LEARNED SKILLS

- Online Learning Resources: I am a committed user of CodeSignal, HackTheBox, LeetCode and HackerRank.
- Coding Language Literate – Over holidays and breaks, I have dedicated hours to learning coding languages, above and beyond my school work. I can quickly adapt to new languages and coding situations.
- Public Speaking – I have gained the skills to speak in front of a crowd, allowing me to overcome any fear while cooperating in groups, making me a better team member. I am also very fond of this skill, as I can confidently ask questions to sate my curiosity and need to grow.
- Group Development – I have participated and thrived in many Hackathons and CTF events, including the Sustainable Development Hackathons and QCS Hackathons of 2023 and 2024. I have also cooperated with friends to develop creative solutions.
- Escaping my Comfort Zone – In many of my personal coding projects (E.g. 'ChristmasBreakPlatformer'), I have stepped out of my depth, trying to understand and further develop projects using huge libraries, totally overhauling the languages I thought I knew. This forced me to learn and adapt alongside my co-workers, on top of simply developing.

Almac Diagnostic Services Work Experience

06/2023 - 06/2023

Almac Group - Craigavon, Co. Armagh

- Shadowed developers at work from all stages of the software development life-cycle, gaining tips, tricks and valuable guidance from seasoned workers.
- Gained knowledge on Almac's unique medical software development lifecycle, favouring careful documentation and quality over speed.

ACADEMIC PROJECTS

Computer Science Challenges Module

'ParameterisedVectorGraphicFaces' - Solo

- A Desktop-Controlling Macro program which inputs a .PNG face image and outputs a dataset of images of posed 3D face models, generated from the original image via Generative AI.
- Includes heavy documentation: How-To Guide, Daily Thoughts & Experience Diary, Blog Post, Testing Plan, Social Media Post and Commented Code.
- Developed with UI.Vision RPA and DAZ3D.
- Developed in Java, CSS, HTML, JavaScript and an arbitrary sequencing language native to UI.Vision.

Software Systems Development A-Level (Year 2)

'SimpsonsDatabase' - Solo

- A visual frontend program for use by either employee or customer actors. Exhibits robust total control over a large Database of products, manufacturers, customers and orders. Exhibits many quality of life features for both actors.
- Was developed according to Test-Driven Development practices and under the DSDM Agile Methodology, going through Alpha and Beta Testing Stages.
- Includes heavy documentation: UML, Entity-Relationship Diagrams, Data Dictionaries and a formal Video Presentation.
- Developed with C# and SQLServer (via official plugin) in Microsoft Visual Studio '22.

Databases Module

'MockUniDB' - Solo

- A command-line program which robustly and effectively manipulates a large Database of Students, Employers, Jobs etc.
- Includes documentation: UML, Entity-Relationship Diagrams, Data Dictionaries and a formal Video Presentation.
- Developed with Java in Eclipse and My SQL in PHPMyAdmin.

Software Systems Development A-Level (Year 1)

'HeroQuestOriginal' - Solo

- An entire port of the dungeon crawler board game created by GamesWorkshop.
- Includes a user creation and login functionalities.
- Boasts a styled, visual GUI using Windows Forms.
- Includes heavy documentation of: User Guide, Development Diary, UML, Class and Form Planning Diagrams.
- Developed with C# and Windows Forms in Microsoft Visual Studio '22.

VOLUNTEERING

- CyberFirst Ambassador - Since entering QUB, I have been spending my time representing the university's cybersecurity department. I am giving talks on online safety, cybersecurity tips and tricks, and presentations on open days on the benefits of a Computer Science course, and the current state of the industry.
- ChildNet Digital Leader - In my final two years of secondary school, I gave talks and presentations on key skills for younger persons to stay safe online. Including: Cyberbullying, Online Influencers, Fake News and the dangers of explicit content.

ASPIRATIONS

- To put my skill-set to use in the world of work.
- To gain hands-on experience and build my soft and technical skills.
- To progress my field and give back to others around me.
- To further my career journey.

INTERESTS

- Performing Poetry and Screenplay.
- Electric guitar (progressive metal).
- Kayaking, Canoeing in lakes and rivers.
- Messing with Generative and Deep Learning AI.
- Scripting small programs for personal use.
- Snooker/Pool.
- Video Games.
- Reading French Novels.

REFEREES

Academic Reference –

Professor John Bustard

Personal Tutor/Advisor for Computer Science Challenges

Queen's University Belfast

16A Malone Rd, Belfast BT9 5BN

(+028) 9097 4669

Personal Reference –

Mr. Johnny Hawthorne

Relevant Shift Leader, Lead Shift Mechanic Beverage Plastics Ltd.

Silverwood Industrial Area, Silverwood Rd, Lurgan, Craigavon BT66 6LN

(+028) 3832 2221

PERSONAL PROJECTS

'SustainabilityHackathon2024' - Group

- Collab with Caleb Hair, Leo Chartier, Craig Thompson and Arpit Kumar-Sahoo.

- A plan to develop tourism in Belfast via the installation of Projectors with historical iconography around the city centre and popular tourist hotspots.
- Involved use of filtering data from large datasets and creation of interactive maps using dynamic webapps. These were used to sell our point through videos and documentation.
- Created in a team with use of OpenDataNI's datasets and Generative AI.
- Developed with Python in Pycharm, and OpenAI's ChatGPT-4o model.

'ChristmasBreakPlatformer' - Group

- Collab with Caleb Hair

- A fun attempt at trying to extend our knowledge of Java with jgl, a Java wrapper for OpenGL that provides cross-platform access to OpenGL using the JOGL Java library. Our goal was to try to make a platforming game, but it was eventually downsized to simple window manipulation and drawing.
- This project did not achieve our shared goal, but still useful, as we learned to wrangle large libraries and extensions to java; through group experimentation, pair programming and reading documentation.
- Developed with Java (jgl, JOGL) in Visual Studio Code.

'BasicBatchRenamer' - Group

- Collab with Caleb Hair

- A fun attempt at trying to extend our knowledge of Java with jgl, a Java wrapper for OpenGL that provides cross-platform access to OpenGL using the JOGL Java library. Our goal was to try to make a platforming game, but it was eventually downsized to simple window manipulation and drawing functions.
- This project did not achieve our shared goal, but still useful, as we learned to wrangle large libraries and extensions to java; through group experimentation, pair programming and reading documentation.
- Developed with Python 3.0 in Pycharm.

'HeroQuestUpdated' - Solo

- An updated version of 'HeroQuestGame' that I worked on in my free time, to not lose my C# skills.
- I replaced all uses of Windows Forms with WPF, to improve the responsiveness and style of the UI.
- With my newer techniques, I optimised the code further and removed a few small bugs that I missed before.
- Developed with C#, .NET 5.0 and WPF in Microsoft Visual Studio '23.

'SimpsonsDownVersion' - Solo

- An updated version of 'SimpsonsDatabaseManager', that I worked on shortly after publishing the first version.
- This version differs from the rest as it uses a lower version of Microsoft .NET (Version 3.0 instead of 5.0).
- I created this additional version after discovering that not all computers can run and support .NET 5.0.
- Developed with C#, .NET 3.0 and Windows Forms in Microsoft Visual Studio '23.

Thank you for your attention, have a lovely day!