# Daniel Mackle

## Year 2 Computer Science Student, Queen's University Belfast

### Contact

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Rapid7,
19 Chichester St,
Belfast, Co. Antrim,
BT1 4JB

### Dear Sir or Madam,

Thank you very much for helping me choose Rapid7 as a potential employer through your Entry Level Recruiting Team's lovely events across Queen's University Belfast, including your invaluable Placement Recruitment Event!

I first learned of this amazing opportunity through both in-person events and the QUB MyFuture platform. I am now pursuing this Placement of AI Software Engineer Intern in Belfast for June 2025. Please find attached my CV.

*I am an excelling academic, having achieved a perfect GPA of 4.0 in both my first year of University and my A-Levels. I am currently a public Cybersecurity representative of both CyberFirst and ChildNet. I am also highly qualified in communication, with a Grade 8 and additional Diploma in Speech and Drama.*

*For the past two years, I have taken up two volunteer roles; as a CyberFirst Student Ambassador and as a ChildNet Digital Leader/Champion. In these roles, I give public speeches and presentations during notable events in QUB and in local secondary schools. I was one of the few to complete the Computer Science Challenges module, wherein I produced cutting-edge systems in the AI field while producing a detailed design and a large amount of documentation.*

*I have always had a huge admiration for Rapid7, which has only grown in the research of this role and the making of this application. I have been amazed by the Rapid7 Command Platform, and the many tools which it offers to its 11,000 satisfied customers. Rapid7 is far ahead of the competition, and I am steadfast in my belief that Rapid7 will give the best placement for both my career and personal growth. This is made obvious by Rapid7 winning the Best SIEM Solution 2024, alongside many other awards and accolades. I would love to participate in the global cutting-edge of research and development, pushing Cybersecurity forward while 'giving back' to the field which I feel connected to.*

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, MyFuture, Indeed)

in http://www.linkedin.com/in/daniel mackle

## TECHNICAL SKILLS

**Coding Languages (Most Self-Taught):**
Java, MySQL, SQLServer, Oracle, Python, C#, C++, TypeScript, XML, WPF, HTML, CSS, BASIC, QBASIC, ARM and ARMLite.

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

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

Knowledgeable in, business architecture frameworks, data analytics and business modelling techniques. I have used project management methodologies firsthand.

## UNIVERSITY EDUCATION

**Master of Engineering:** Computer Science incl. Professional Experience
**Queen's University Belfast** - Belfast
 09/2023 - 06/2028 (Current)
On track for a predicted degree classification of 1st.
*(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)*

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## PROFESSIONAL SUMMARY & CORE SKILLS

- Enthusiastic academic, who has overcome many difficult yet rewarding optional challenges including the extremely competitive and demanding Computer Science Challenges module. I which, I thrived in a fast-paced environment, creating in-depth and detailed research while innovating on a business-oriented product which relies on newly emerging technology.
- Leader of a winning team for this year's Queen's University Belfast Sustainability Hackathon, as of the 17th of October. The task involved the analysing and interpreting of quantitative and quantitative datasets to build creative solutions, grounded in hard evidence due to critical thinking. In this dynamic environment, we won the Most Creative Idea award.
- Confident in the business end of software development, having learned about and participated in AGILE Project Management Methodologies like SCRUM. We studied optimal organizational design. In this, I scored an A*.

## 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. This shows my Integrity and Dedication.
- Effectively operate heavy machinery, which included identifying, planning and solving the plethora of errors the large machines may experience, portraying my skills in Troubleshooting, Adaptability and Reliability.

**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. In this, I developed my awareness and communication skills.

**Kainos CodeCamp**                                        06/2023 - 06/2023
**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. I had to quickly adapt to this environment.
- Gained experience in using the web-based IDE Replit, alongside learning how Kainos manages and builds on huge repositories with Git.

**Almac Diagnostic Services Work Experience**             06/2023 - 06/2023
**Almac Group -** Craigavon, Co. Armagh

- Shadowed and interviewed developers at work from all stages of the software development life-cycle, gaining tips and guidance from workers. In this, I focused on learning unique practices in a high-speed workplace.
- Gained knowledge on Almac's unique medical software development lifecycle, favouring careful documentation and quality over speed.

## PREVIOUS EDUCATION

**A-Levels/GCSEs**, 09/2023 - 04/2028
**Banbridge Academy** - Banbridge, Northern Ireland

- Software Systems Development *(A*)*
- Physics *(A)*
- Biology *(A*)*
- French *(C) [Additional AS-Level]*

(For the above grades, I have achieved the Award of Academic Achievement for A-Levels.)

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

## 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.

## 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 Mechanic Beverage Plastics Ltd.*
Silverwood Industrial Area, Silverwood Rd, Lurgan, Craigavon BT66 6LN
(+028) 3832 2221

## MAIN ACADEMIC PROJECTS (TOP 2 OUT OF 4)

**Computer Science Challenges Module**
*'Parameterised-Vector-Graphic-Faces' – Solo – Earned 70%*

- *A Desktop-Controlling Macro program which inputs a .PNG face image and outputs a dataset of images of posed 3D face models, generated via Generative AI. I had to build my skills in these new fields from scratch.*
- *Includes heavy documentation: How-To Guide, Daily Thoughts & Experience Diary, Blog Post, Testing Plan, Social Media Post and Commented Code. In this, I truly show off my attention to nuance.*
- *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)**
*'SimpsonsDatabaseManager' – Solo – Earned 95%*

- *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. This insight into the development workplace is vital for my career.*
- *Includes heavy documentation: UML, Entity-Relationship Diagrams, Data Dictionaries and a formal Video Presentation. Shows attention to detail.*
- *Developed with C#, XML and SQLServer.*

## MAIN PERSONAL PROJECTS (TOP 3 OUT OF 6)

**'SustainabilityHackathon2024' - Group**
*– Collab with Caleb Hair, Leo Chartier, Craig Thompson, Arpit Kumar-Sahoo.*

- Won most Creative Idea in the 2024 QUB Sustainability Hackathon.
- 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 detailed documentation.
- Developed with Python in PyCharm, and OpenAI's ChatGPT-4o model.

**'ChristmasBreakPlatformer' - Group**
*– Collab with Caleb Hair*

- A self-motivated attempt at extending our knowledge of Java with jgl, a Java wrapper for OpenGL that provides access to OpenGL using the JOGL Java library. Our original plan was to make a game, but this was downsized.
- 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.

**''HeroQuestUpdated' - Solo**

- An updated version of a sizable project, a fully visual based port of a complicated board game developed by Games Workshop.
- 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 and removed bugs.
- Developed with C#, .NET 5.0 and WPF in Microsoft Visual Studio '23.

Thank you very much for your attention, have a nice day!