

# Idrees Roshan

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## Education

**University of Nottingham:** *BSc Computer Science*

*Oct. 2021 – Nov. 2024*

**Mill Hill County High School:** *A levels and GCSEs*

*Sept 2014 – Jun. 2021*

- A-Levels: Mathematics (A\*), Further Mathematics (A\*), Computer Science (A)
- GCSEs: 9 GCSEs, Mathematics (9), English Language (7)

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## Skills

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|----------|--------------|-----------|---------|
| • Python | • C#         | • Haskell | • Unity |
| • C      | • HTML/CSS   | • Java    | • Git   |
| • C++    | • PostgreSQL | • Docker  | • Linux |

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## Experience

### **Teragence - Software Engineer Internship**

*Sept. 2023 – Oct 2023*

- **Technical skills:** Gained hands-on experience with **Docker** for containerized development, **GIS**, and website development, enhancing technical proficiency across various tools.
- **Communication:** Gained valuable communication skills by collaborating with team members to create presentations and live demonstrations of the company's software, effectively showcasing key features and functionality to stakeholders.

### **KL2C Nottingham Hospital Charity – Software Engineer**

*Oct. 2022 – May. 2023*

- **Teamwork:** collaborated with a team of 7 to develop a peripheral eye test application for pediatric use. The software has since become a research tool for PhD students.
- **Leadership:** Served as the **Git** leader, ensuring adherence to version control best practices and streamlining collaboration.
- **Presentation skills:** Carried out a live demonstration and presentation of the software to hundreds of industry professionals, highlighting its functionality and innovation.

### **Tutoring at Mill Hill County High School**

*Sept. 2019 – June. 2021*

- Tutored GCSE students with learning disabilities in Mathematics.
- Improved communication, understanding of diverse learning styles, and adaptability.

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## Projects

### **Peripheral vision test for children**

- Built in **Unity** with **C#**, incorporating a custom range finder library to calculate user distance from the screen, ensuring consistent testing conditions.
- Applied **Agile methodology** throughout the project lifecycle facilitating iterative development and continuous feedback to meet user requirements.

### **Tetris AI**

- Developed in **Python** using the **Pygame** module, implementing a greedy algorithm and **Min-Max** approach for AI decision-making.

### **Snake**

- Developed a fully functional and interactive version of the classic snake game in **Java**, featuring unique levels and power-ups to enhance gameplay.

### **AES-GCM**

- Fully implemented **AES-GCM** encryption in **java** with **Gradle**, including comprehensive unit testing to deepen my understanding of cryptographic algorithms and ensure security and reliability of the implementation.

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## Achievements

### **3<sup>rd</sup> in National Student Investor Challenge**

- Competed in a 3-stage investing challenge with 9,000 teams.
- Collaborated with my team on investment decisions and research.
- Developed a retirement plan and delivered a winning presentation to professional investors.

### **Senior UKMT Maths Challenge - Gold and Kangaroo Awards**

- Demonstrated strong mathematical reasoning and problem-solving skills.
- Achieved the gold certificate, earning an invitation to the challenging Kangaroo Maths Challenge.

### **MVP of University of Nottingham BUCS Volleyball Team**

- Served as the team Captain, responsible for match organization, referee coordination, and travel logistics.
- Recognized as the Most Valuable Player (MVP) following a successful season that resulted in a division promotion.