

Ujesh Sakariya

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Education

University of Manchester, BSc Computer Science

Sep 2024 – Jun 2027

Expected Grade Overall: 1st, Semester 1:1st, *Finished top 15% of the cohort*

Relevant modules:

1st team Medics Hockey Captain | Winner of the GreatUniHack'24 | Tennis Society

Nottingham High School

Sep 2010 – Jun 2024

A-levels: A*A*AA (Mathematics, Computer Science, Further Mathematics, Economics) | GCSEs: 999999999A*

Awarded an academic scholarship for top 5% of GCSE cohort | Founders Award for A-level Excellence

House Captain | president of Computer Science Society | 1st XI hockey player and 2-time national finalist – 4th at U16

Relevant Work Experience

PwC AI and Modelling, Work Experience

Jun 2025

- Developed a Python model to forecast NHS population across 42 ICBs by age group and gender over a 20-year horizon
- Performed extensive data wrangling using pandas and integrated Fingertips API data to project condition prevalence trends

Susquehanna International Group Discovery Day

Apr 2025 – Apr 2025

- Selected to attend a seminar on trading, quant and research at SIG

A-level and GCSE Computer Science and Maths tutor

Aug 2024 – Present

- Mentor 2 underperforming students weekly, with both achieving above 90% in recent examinations

Freelanced website developer, Developed the Rushcliffe Arena Badminton Club website

Aug 2024

- Created the Rushcliffe Arena Badminton Club website with recurring card payment functionality, boosting on-time membership fee payments by 60%

PwC, Virtual Insight Programme

Jul 2023

- Selected to gain an understanding of the firm's use of emerging technologies to tackle business and societal challenges.

Hyntelo, Virtual work experience at AI Solutions firm

Jul 2023 – Aug 2023

- Engaged in bi-weekly R&D sprints and daily SCRUM meetings for 2 months, comparing the 2 LLMs Llama 2 and ChatGPT 4 and their use in fine tuning to optimise chat-based AI capabilities

NHS IT Department, Work Experience

Feb 2023

- Analysed the role of technology to optimise the NHS, including A&E patient management, staff allocation and the prioritisation system for COVID-19 vaccination.

Projects and Certifications

Messaging Application

Sep 2023 – Apr 2024

- Built a real-time messaging web application using Python Flask and WebSockets, with RSA encryption and Miller-Rabin primality testing for secure key generation
- Encrypted private RSA keys using AES to prevent exposure during transmission; implemented binary exponentiation and Euclid's algorithm for efficient modular arithmetic
- Managed user credentials and messages in MySQL, implementing Google TOTP for secure, breach-free authentication.

Astrophysical Computational Modelling for British Physics Computational Olympiad

Jul 2023 – Aug 2023

- Achieved Gold Award, placing in the top ~6%
- Created an interactive GUI simulating 13 astrophysical phenomena in 2D, 3D, and real-time animations, with adjustable parameters for dynamic model visualisation

Social Media application for my Young Enterprise team, Financial and Technical Director

Jun 2023

- Developed a website using Python Flask to boost product awareness and drive user engagement through interactive posts, achieving a 15% sales increase.
- Oversaw the business finances, ensuring that waste is minimised resulting in 350% profit generated

Harvard CS50x, Certification

Sep 2022 – Jun 2023

- Gained hands-on experience in C, Python, SQL, HTML, CSS, and JavaScript through algorithmic and web projects

Leadership and Extracurricular

First Year Team Project Module, Managing Director

Feb 2025 – Mar 2025

- Led a team of 6, using Agile methodologies and sprint planning to manage workflow, monitor progress, and deliver a fully functional multiplayer web game
- Integrated Spotify API for dynamic song selection and used WebSockets to enable real-time multiplayer interaction and synchronised gameplay.

Winner of the GreatUniHack'24

Nov 2024

- Collaborated with a team to build a financial tool which aids first-time homebuyers with mortgage planning through financial projections and house price predictions within 24 hours
- Presented to 200+ attendees at the closing ceremony, demonstrating a tailored savings plan

Charity Swimathon, Organiser

Feb 2023

- Singlehandedly organised a charity swimathon, raising over £2,000 for Operation Orphan with over 50 participants

Skills

Technologies: Python, JavaScript, HTML, CSS, SQL, C, RSIC-V, Verilog, Java | **Awards:** Trinity Rock and Pop Grade 6 Drums