

# Nav Leelarathna

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## EDUCATION

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- 2019-2022** **Homerton College, University of Cambridge**  
Currently first year, studying for BA Hons Computer Science.
- 2014-2019** **The Manchester Grammar School**
- 2019** **A-Levels:** Maths (A\*), Further Maths (A\*), Physics (A\*), Chemistry (A\*)
- 2017** **IGCSE** 10 A\*s and 1 A  
- A\* in EPQ (AS Level)

## SKILLS

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- Programming Languages** Proficient in: Python (>5 years experience), Java  
Familiar with: C / C++, SQL, OCaml, javascript, HTML  
- Can write documents in latex
- Leadership / Communication** Head of sixth-form engineering society, gave talks and organised weekly activities.  
Founder and head of sixth-form cyber-security society.  
Subject representative for Computer Science at my college in University.

## COURSES

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- University courses completed** Machine learning and real world data, scientific computing, algorithms, discrete mathematics, databases, introduction to graphics, introduction to computer science, digital electronics, object-oriented programming, operating systems, software and security engineering, interaction design, introduction to probability.

## WORK EXPERIENCE

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- Jul 2018** One week work experience at Rolls Royce, shadowed the team that maintains the Trent 900 engine which powers the world's largest commercial aircraft, the A380. Was able to see how software was used to analyse various data sent from numerous sensors within each engine to detect issues before they become serious problems. Also got to see the importance of clear communication to co-ordinate effectively in large teams through shadowing meetings / presentations.

## EXTRA-CURRICULAR

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- 2018** Participated in the National Cipher Challenge (A country-wide cryptography competition run by the University of Southampton). My role was to write programs to test ideas and perform decryption quickly. Our team placed second in the country overall.
- Oct 2018** Coded a deep neural network from first principles (using no machine learning libraries) to classify handwritten digits taken from the MNIST database as a personal project. It achieved 98% accuracy after training. Then replicated project using the tensorflow library.
- 2018** Participated in the government's Cyber Discovery Programme (A country-wide cyber-security competition), which consisted of dozens of hacking and coding challenges. Made it to the final round, which was a 2-day live event in Manchester consisting of hacking competitions and talks given by cyber security specialists.
- 2017-2019** Written various projects using python, such as games (snake, old-school ascii roguelikes, 2D platformers and danmaku-style bullet hells) and other programs like ecosystem simulations, stock price graphing software, cryptographic tools with GUI etc. Experienced in data-mining and web-scraping with BeautifulSoup, used it to compile > 600,000 movie reviews (involving collection, cleaning and parsing) for a machine learning project.