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| **EDUCATION** | |
| **2014 onwards** | **Trinity College, Cambridge**  MBBS BChir  Graduation – 2020  BA Medical Science  Graduation - 2017 |
| **2012-2014**  **A-Level:**  **AS-Level:** | **Hampshire Collegiate School, Southampton**  Mathematics – A\* (taken 2 years in advance via self study same for GCSE Maths)  Biology – A\* Physics – A\* Chemistry – A\*  Further Maths –A Spanish-A |
| **GCSE**  **Achievements** | 11 A\*s in GCSE exams  Completed KUMON Maths self study programme at 15  ‘Best in school’ Medals 7 years in a row  Public Speaking award  Deputy Head Girl |
| **WORK EXPERIENCE** | |
| 1. Research Project in Molecular Biology Lab - Summer 2016 (2months)  Worked on 2 projects:  Ischaemic Preconditioning Study   * Searching for a biomarker of Ischaemia   Extreme Altitudes Study   * Using biological assays to search for a biomarker in plasma and urine from athletes at high altitude   2. Research Internship in European Bioinformatics Institute (EBI) - Summer 2017 (3months)  I used data from The Cancer Genome Atlas (TCGA) to identify oncogenes, by looking at the over and under expression of miRNA. This project involved learning and using the programming languages: bash, python, SQL and R.  3. Research Project in MRC-UK Lab (2018)  I was involved in a project trying to identify small INDELs (Insertions and Deletions) involved in the adenocarcinoma pathway and their distribution in coding as compared to non-coding regions of the genome. The data for this project came from the genomes of patients with adenocarcinoma and a control group - we then compared the distribution of genes found in this to the distribution found in the TCGA.    4. Research Project in CRUK (2019)  Genomics project on serous cell ovarian cancer as part of the Brenton Team at Cancer Research UK  5.Clinical Analyst Internship University Hospital Southampton (March - August 2020)  I used clinical data pertaining to COVID-19 patients and machine learning to create predictive algorithms modeling the outcomes of covid-19 patients and the number of cases over time. I also got involved in both the statistics and the write up of several clinical research projects including AKI in covid, hyper inflammation in covid patients, predictive modeling of pathology found in colonoscopy and a case series of atypical covid presentations.   |  | | --- | | **ACADEMIC and PERSONAL PROJECTS** |  * I was involved in writing an Expert review on the management of colonic polyps. My role was to develop a search strategy and perform a scientific literature search to identify all existing publications in that field and then to summarise the design and findings of each publication.   Genomics:   * Data mining skills using OMIM databases * Proficient in using Ensemble genome browser * Using MolBrowser (interactive molecular graphics software) to visualize and manipulate the three dimensional structures of biomolecules * PCR primer designing * Experience in Python, Swift and Basic mathematical modelling and machine learning using data sets on Kaggle and Coursera courses. * Proficient in Basic Statistical Analysis and learning further Statistics   Lab experience:   * Project Design - designed my own experiment to determine an unknown toxin and its site of action in the respiratory chain * Developing and standardising assays * ELISA * SDS PAGE * Gel Filtration column chromatography * Restriction mapping * Bradford Assay   Ongoing Projects   1. ­­­Development of a machine learning model to improve health care resource utilisation in patients requiring colonic investigations during the Pandemic   Publications   1. Recent advances in the management of large and complex colonic polyps   (Gaius Longcroft-Wheaton, Megha Bhandari, Asma Alkandari, Pradeep Bhandari (2018))   1. Endoscopic Resections in Inflammatory Bowel Disease: A Multicentre European Outcomes Study   Prizes  Knott Trust GP longitudinal case Prize in medical school  Presentations  Cambridge University Paediatrics National Annual Conference  Presentation of poster ‘The early use of steroids in the treatment of Acute Demyelinating Encephalo-myelitis – a literature review’ Megha Bhandari | |
| **Personal Statement**  I have been struck by the impact of the application of big data analysis to medical data. Whilst the outcomes are of interest to me, I have begun to develop an urge to understand how exactly we analyse such big data sets and discover such results. I find the point where Mathematics, Computer science and Biology interact incredibly fascinating and this is where I would like to place myself in the future. My background so far strongly supports the biological aspect but I am strongly interested and determined to push myself, which has so far motivated me to learn programming and mathematical modelling independent of my course and apply it to a number of different projects and internships, further developing my learning and enabling me to build a resume of publications and projects. I would like to continue to do this and progress to being proficient enough in machine learning to use it as a tool to express my creativity of thought coupled with my background understanding of the medical field to revolutionise the future of medicine. | |

**Interpersonal Skills**

* **Adaptability**
  + Joining an advanced Spanish course where we talk about complex topics such as history and politics and culture in Spanish has really helped me develop the ability to jump right into an new setting, totally different from my comfort zone and do well in this environment.
* **Creativity**
* Painting, Drawing and Writing – written and performed a segment on cultural festivities on BBC Radio Solent
* **Effective communication**
  + Clear and articulate communicator when explaining ideas, I’ve received positive feedback from group and individual presentations during Lab meetings and presenting to other research groups during my summer research experience
  + Good listener

**Non-Academic Projects**

* Classroom assistant at Cedar School for Children with disabilities (2 years voluntary)
* Ward Assistant at Southampton General Hospital (Summer 2013)
* Teaching English at a rural school in India (Summer 2014)
* Learning Spanish via CULP advanced programme
* Hackathons:
  + ChariTech 2017
  + CodeforCovid19 2020

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| **Languages** |

* English
* Spanish
* Hindi

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| **ACTIVITIES & INTERESTS** |

* An avid badminton player, college badminton’s women's first team
* Indian Classical Dance
* Violin, Piano and Indian classical singing