

Raman Chahal

Aspiring Bioinformatician with skills in biochemistry, data analysis, computer science as well as laboratory skills

EDUCATION

MSc Bioinformatics -Distinction- Newcastle University

2019-2020

- **Core modules:** High-throughput technologies, bioinformatics theory and practice, modelling cellular systems, programming for biologists, statistics and mathematics
- **Research Project:** Machine learning approaches for biomarker identification in hip and knee osteoarthritis

My ability to work as a team and problem solving skills were demonstrated throughout my Master's course, but especially during the dissertation. This was a collaborative project with University Medical Centre Utrecht where constant communication was required in order to make successful predictive machine learning models for biomarker prediction in OA patients. Machine learning was something I had not done before this project and a lot of the programming was self-taught. Overall this project scored 73% and allowed me to secure a Distinction.

To learn more about this project (and many others) please visit my website: <https://raman-chahal.netlify.app/>

Bsc Biochemistry -2:2(Honors)- Newcastle University

2016-2019

- **Course covered many modules including:** Applied biochemistry, bioinformatics, biochemistry of gene expression, cancer and chronic disease, (DNA replication, recombination and repair), (proteins, enzymes and analysis)
- The course enforced self-directed learning to improve knowledge in the field of biomedical sciences, while also teaching industry-standard analytical techniques, which can be used in drug design and synthesis.
- **Research Project:** Modelling the impact of pH variations on trypsin in cystic fibrosis.

This course not only taught me the many theories of biochemistry, but also fundamental laboratory skills. Individuality was highly stressed during the research project, and so we were mainly left to our own devices. It was therefore very important to work safely within the lab, and perform experiments carefully and accurately.

Portfolio:

<https://raman-chahal.netlify.app/>

Email:

raman.87rc@gmail.com

GitHub:

<https://github.com/RamanChahal98>

SKILLS

- Python
- RStudio
- Machine Learning
- Mathematical Modelling
- Linux
- HTML/CSS
- Laboratory safety and practice

PROJECTS [LEARN MORE>](#)

- Machine Learning Method for Biomarker Identification
- Uniprot Protein Alignment tool
- Genome assembly/expression analysis of Chlamydia trachomatis
- Computational model of riboflavin biosynthesis in B.Subtilis
- Exploration of FLP-27
- Various Tensorflow Projects
- Simple GC Content calculator
- PDF to audiobook converter

EXPERIENCE

Lab Assistant – Newcastle University

2016-2018

- Worked as an Lab assistant working with B.Subtilis, routinely performing pipetting, gel electrophoresis, and autoclaving.

To subsidise my studying costs, I worked part-time as a lab assistant at Newcastle University. Here, I got more accustomed when handling high-end lab equipment, such as autoclaving units, gel-electrophoresis stations among others.

Office Assistant – Linthorpe Surgery

2016-2018

- Tasked with updating and maintaining patient records for NHS England.
- Gained experience developing simple python and AHK scripts to streamline workflow.

During my time with Linthorpe Surgery I was frequently tasked with manually updating patient records in the NHS database. This method was too slow and often proved inaccurate, due to its tedious nature. To streamline the workflow I made a simple python script. The script worked by parsing through the excel datasheet, with new patient mobile numbers and email addresses, and updating them if they had changed. To avoid computational errors I manually read through the updated datasheet to see if it was all done correctly. Overall this greatly minimised the time spent on this task and improved productivity.

First Aider – St John's Ambulance

2013-2016

- Trained and volunteered as a first aider for St John's Ambulance in the Middlesbrough area.

Volunteering as a first aider greatly improved my communication amongst peers and public alike. Acting in a professional and proficient manner was essential for this role.