

Matthew Knowles

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EDUCATION

University of York

York, UK

MMath Mathematics, Grade: First (Expected)

October. 2018 – June 2022

- Focus on Pure Mathematics, namely algebra. Some statistics and modelling
- Third year group dissertation:

Droitwich Spa High School

Worcester, UK

A-Levels in Maths, Further Maths and Physics, Grades: ABB respectively

September. 2014 – June 2018

EXPERIENCE

Undergraduate Research Intern (Bioinformatics)

July 2020 – September 2020

Department of Biology, University of York

York, UK

- Developed a pipeline in Python to using the Burrows-Wheeler-Aligner, SAMTools to collect, sequence, align and call the peaks of ChIP-Seq data
- Further developed an R pipeline to apply machine learning libraries to the acquired data
- Identified transcription factors for further study into breast cancer treatment

Mathematics Student Ambassador

November 2018 – March 2020

Department of Mathematics, University of York

York, UK

- Showing prospective students and parents around the university
- Answering questions about life and studying at university

Store Assistant

October 2017 – December 2018

WHSmth

Worcester, UK

- Helping customers around the store to find the things they need
- Store maintenance, cleaning

Reaserch Intern (Particle Physics)

July 2017 – August 2017

School of Physics and Astronomy, University of Birmingham

Birmingham, UK

- Using Python to visualise HiSPARC Cosmic ray data
- Applying statistical methods to the data to locate stars which are potential sources of cosmic radiation
- Presented results at the 6th annual HiSPARC conference at the University of Bath

PROJECTS

Stock Price Prediction using Neural Networks | *Numpy, Yahoo Finance API, SciKitLearn*

September 2020

- Implemented a simple program to fetch stock price data using Yahoo Finance
- Time-series of price on close plotted using Matplotlib
- Used a recurrant nernal network to predict future stock prices
- Used Celery and Redis for asynchronous tasks

SKILLS

Programming Languages: Python, C++, R, Java, SQL, HTML/CSS

Communicative Languages: React, Node.js, Flask, JUnit, WordPress, Material-UI, FastAPI

Developer Tools: Git, Vim, VS Code, Rstudio Server, Rstudio Desktop

Libraries: pandas, NumPy, Matplotlib

Communicative Languages: Fluency: English, Norwegian **Intermediate:** Russian, German **Beginner:** Mandarin