Matthew Knowles

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EDUCATION

University of York York, UK
MMath Mathematics, Grade: First (Expected) *October. 2018 – June 2022*

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 prorgram to fetch stock price data using Yahoo Finance
- Time-series of price on close plotted using Matplotlib
- Used a recurrant nerual 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: English, Norwegian, Russian, German, Mandarin