

# Cameron Grove

+44 7952154754 | [camerongrove96@gmail.com](mailto:camerongrove96@gmail.com) | [www.pitchingbot.com](http://www.pitchingbot.com)

## EDUCATION

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### Durham University

*Doctor of Philosophy, Computational Astrophysics*

Durham, UK

*Sep. 2018 – Present*

I work on the Dark Energy Spectroscopic Instrument (DESI) project, running and analysing high resolution gravitational simulations containing billions of particles to learn more about the properties of our universe

### University of Cambridge

*Master of Science, Physics, First Class Honours, Top 5% of the Cohort*

Cambridge, UK

*Sep. 2014 – June 2018*

## EXPERIENCE

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My PhD programme gives me the opportunity to undertake projects with external partners

### Angstrom Sports, Senior Data Scientist

Feb. 2022 – May. 2022

*London, UK*

- Worked with MLB data to improve baseball game forecasting models with the aim of accurately predicting the likelihood of different outcomes.
- Refined models for assigning player skill ratings, measuring changes to the league environment, and simulating teams' in-game decisions
- Balanced considerations of model accuracy and model runtime in situations where results are extremely time-sensitive

### Department for Education, Data Science Lab

Jan. 2020 – Apr. 2020

*London, UK*

- Developed projection models in R for pupil attainment, investigating the effects of characteristics and disadvantage on pupils' academic performance between ages 11-16
- Produced a dashboard to allow for easy exploration of the models by non-expert stakeholders
- Gained experience in working with multiple large databases containing sensitive information
- Worked in a dynamic, cutting edge, environment where I had to develop my own research questions and share my findings with a wide audience
- Considered important ethical questions in my research to ensure that the results were fair and non-discriminatory

### Northumbrian Water

May 2019 – July 2019

*Washington, UK*

- Produced a machine learning anomaly detection system for wastewater flow in sewage treatment works, outperforming existing labour intensive methods
- Used a wide variety of time series analysis methods including LSTM neural networks and SARIMA.
- Worked effectively to deadlines in a team and presented results in a professional environment

## TECHNICAL SKILLS

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**Languages:** R, Python, SQL

**Developer Tools:** Git, Docker, Jupyter, RStudio, RShiny

**Expertise:** Machine Learning, High Performance Computing, Data Visualisation

## OTHER SKILLS

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Experienced at public speaking. I have given multiple conference and seminar talks to present my research to a large audience

Capable of working remotely in large international collaborations such as the Dark Energy Spectroscopic Instrument project

Proficient in working with baseball statistics and pushing the boundaries of public sabermetric analysis. A [website](#) presenting results from my models receives hundreds to thousands of visits per day and I have been nominated for a [SABR contemporary analysis award](#). I won the inaugural [SMT Data Challenge](#).