LEWIS SHAW

MPhys Astrophysics

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PROFESSIONAL SUMMARY

Master's graduate from a world-leading university. Studying astrophysics has allowed me to advancing my skills in problem solving and research, paying very close attention to detail. I have a strong academic work ethic, that has allowed me to develop many transferable abilities, easily applicable to an industry setting. Proficient in programming in Python, using libraries such as Numpy, Scipy and Astropy. Experienced in navigating Linux/Ubuntu systems, Microsoft Excel, and LaTeX for creation of documents. I have utilised all of these skills in multiple research projects over the course of my 5-year degree.

NOTABLE PROJECTS UNDERTAKEN

Spectral Emission from Tidal Disruption Event Gas Clouds around Supermassive Black Holes

Source Code

My master's thesis involved detailed modelling and analysis of Tidal Disruption Events (TDEs) around Supermassive Black Holes, in an attempt to describe certain phenomena. The project involved working with an already established modelling code, understanding both the input and output, as well as deciding how best to implement certain features of the code to model the TDEs in specific ways. A large portion of the project was also an end of year presentation, in which notable results were discussed to our scientific peers at the University.

Scalar Field Dark Energy

Source Code

My senior honours project discussed the idea of modelling the universe's expansion, more specifically the elusive dark energy , as a scalar field. This involved solving complex differential equations and modelling and interpreting the solutions. The project concluded with a summarising poster to effectively communicate the findings of the project to a general audience.

NOTABLE EXPERIENCE

Team Member

Benugo

April 2017 – June 2023 Redcoat Cafe, Edinburgh, Scotland (On-Site)

In my position as a Team Member at Benugo, I was responsible for providing good quality customer service to people from all over the world as they visited Edinburgh's historic Castle. With the very fast paced environment I learned to work efficiently under pressure whilst still working effectively as part of a team, especially during private functions in the evenings such as the Royal Edinburgh Military Tattoo.

Design Engineer

Kinetikos F1 in Schools Team

November 2015 – October 2016 ICHS, Livingsotn, Scotland (On-Site)

Taking part in the Formula One in Schools global STEM competition opened my eyes to how engineering projects are undertaken, and the amount of work that goes into them. During this time my skills in problem solving, testing, teamwork, and communication were all pushed to their limits resulting in our team representing Scotland at the World Finals in Austin.

REFERENCES

References Available Upon Request.

EDUCATION

Master of Physics (MPhys)

University of Edinburgh

September 2018 – Jul 2023

☑ Predicted 2:1/1st Class degree.

MPhys Project:
"Spectral Emission from Tidal Disruption Event Gas Clouds around Supermassive Black Holes"
Supervised by Prof. Andy Lawrence.

Senior Honours Project:
"Scalar Field Dark Energy"
Supervised by Prof. Andy Taylor.

Key Modules: Lagrangian Dynamics, Nuclear Astrophysics, Computer Modelling, Radiation Processes In Astrophysics, Telescope Group Project

High School

Inveralmond Community High School

August 2012 – June 2018

Advanced Higher: Physics, Mathematics. (BA)

Higher: Physics, Mathematics, English, Chemistry, Graphic Communication. (AABAB)

National 5: Physics, Mathematics, Chemistry, English, Modern Studies, Graphic Communication. (AAABAA)

SKILLS

Python (Programming Language), Research, Linux, Communication, Teamwork, Mathematics, Problem Solving, Presentations, Statistical Data Analysis, Microsoft Excel, UK Driving License

LANGUAGES

English
Native

Spanish
Novice

EXTRACURRICULAR

World Challenge Expedition
Ecuador 2016

Bagpipe player
Started 2012