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**Profile**

Proactive, passionate, analytical postgraduate student at the top university in my field. Natural problem solver with strong experience with Linux, Python and Fortran. Some experience with C++. Holds BSc(Hons) and will hold MSc September 2021, can begin employment before this date. Academic background in Physics, strong experience with big data.

**Education**

**University of St. Andrews**  Astrophysics MSc 2020-2021

Relevant modules:

* Monte Carlo Techniques
* Stellar Physics
* Research Skills
* MaNGA Project

Dissertation: TBD.

**University of Portsmouth** Physics and Astrophysics BSc(Hons) 2017-2020

Grade: High 2:1 (1% from 1st)

Relevant modules:

* Mathematical Physics
* Computational Physics
* Thermodynamics and Statistical Physics
* Applications of Physics
* General Relativity

Dissertation: Modelling Supermassive Primordial Stars using Stellar Evolution code.

**Experience in Data**

**MaNGA** MSc Project

MaNGA survey collected data from ~10,000 galaxies, ~1GB per galaxy. MARVIN is software designed for remote use. Have contributed to current version MARVIN functionality. Designing Python scripts and documentation on finding and analysing post-starburst galaxies in dataset, some of this currently available upon request. To be used by undergraduates in Astrophysics to learn about galaxies. Final release May 2021.

**MESA** BSc (Hons) Dissertation

**M**odules for **E**xperiments in **S**tellar **A**strophysics is high accuracy stellar evolution code in Fortran and Python in Linux OS. I used this to model growth of Universe’s first stars to ~106 sun masses to analyse behaviour. Resulted in direct collapse black holes – observations agree with findings, now strong evidence for new model on formation of high redshift quasars.

**Occupational Experience** Various Occupations since 2016. Examples:

**Outreach Demonstrator** Institute of Physics 2019-2020

During final year of undergraduate studies, hired by Institute of Physics through Institute of Cosmology and Gravitation to work in outreach for Physics and Space. Participated in “Sky at Night” charity event, explained gravitational waves from primary school level to adult level understanding.

**Keyholder** Hackett London 2019

Due to extended experience in retail, was trusted with role of keyholder in Portsmouth branch of Hackett London. Naturally outgoing nature beneficial to job and developed excellent interpersonal skills.

**Computation Proficiencies**

* Python
* Linux OS
* Fortran (versions since ’77)
* MATLAB
* C++
* LaTeX
* LabVIEW
* Microsoft Suite

Experience in academic report writing at publishable level. Strong ability in presenting difficult and abstract concepts to wide variety of audiences. Works well under pressure.

**Achievements and Skills**

* Physics Society President
* Postgraduate Representative
* Course Representative (2 years)
* Interpersonal skills
* *“Warhammer 40,000”* club founder
* Prefect
* Qualified Level 2 Sports Leader
* Self-taught Piano and Ukulele

**Referees**

Dr Anne-Marie Weijmans – *permission to contact.*

Dr Moira Jardine – *permission to contact.*

Dr Daniel J. Whalen – *permission to contact.*