**Adam Mousley**

**Junior Data Engineer Consultant**.

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| **University Degree :** Astrophysics  **Academy Stream :** Data Engineering  **Summary.**  As part of Adams bachelor's degree at Aberystwyth University and his master's degree at the University of St Andrews, he became proficient in Astrophysics and subsequently the coding language Python. Predominantly from his masters thesis, which entailed simulating a molecular gas cloud orbiting in a galactic potential to investigate if tidal effects were a leading cause of star formation, his attention to detail, analytical and innovative thinking, as well as independent working were honed through the extensive use of Python. In turn this will allow him to apply his knowledge as a data engineer and thus enable him to witness first hand the important outcomes of successful data management.    On a personal level, Adam has a background in long distant running, completing numerous races around the globe ranging from 5k to half marathons, while he is also a keen amateur photographer. Long distant running can often lead to injuries and set backs during training for races, as a result he showed patience, resilience and determination in order to complete certain races. He is extremely motivated to expand his educational horizons while simultaneously continuing his professional development through this data engineering consultancy opportunity.  **Work Experience.**  **October 2020 - October 2021**  **Gwesty Cymru - Reception/Bar Person**  Adam was the only live in member of staff for the Hotel (Gwesty Cymru, Aberystwyth), which meant he was the first point of call in dealing with any needs of the guests. His responsibilities varied in this position, ranging from taking bookings over the phone, to serving drinks and delegating tasks to his colleagues. Ultimately it was his responsibility to ensure the hotel operated as smoothly as possible.  **August 2018 - October 2018**  **University of new south wales - Summer Intern**  Adam went to the University of New South Wales and completed a scientific project, assisting a PhD student, related to computational chemistry and physics which specified on the study of a variation in the fundamental constants. A major aspect of this project was spent learning the basics of python to analyze data and understand how the programming language worked. The results of this project were then successfully presented to two different research groups. The first presentation was at the UNSW and the second at Aberystwyth University. His contribution meant that he became a co-author on the paper titled ”Diatomic Rovibronic Transitions as Potential Probes for Proton-to-Electron Mass Ratio Across Cosmological Time.”, published in the Australian journal of chemistry.  **Education.**  **September 2016 - July 2019**  **Add University: Astrophysics, 1st(hons)**  **Final Year Project:** (Masters final year project) - Adam's final year project was a study on molecular clouds and how tidal effects can lead to star formation. Molecular clouds are the breeding grounds for close to all the stars we see today, therefore, it was important to investigate if tidal effects produce regions of high gas density as molecular clouds orbit around the centre of the galaxy. Regions of high gas density in the correct conditions later lead to star formation. He successful simulated an ideal molecular gas cloud orbiting in a galactic potential, through the use of python, for one galactic year and then for two galactic years. The results from this study demonstated that tidal forces have a significant impact on the structure of molecular clouds and lead to regions of high density. Further research is needed to quantify the signifcance of tidal effects and star formation is likely a combination of external and internal effects acting on molecular gas clouds.  **Year 1 Modules:** Calculus, Classical dynamics, Classical Physics, Introduction to computational and Experimental Physics, Algebra and Differential Equations, Astronomy, Further Algebra and Calculus , Forces of Nature, Physics Career Planning and Skills Development, Modern Physics, Introduction to Computational and Experimental Physics.  **Year 2 Modules:** Mathematical Physics, Thermodynamics, Data Handling and Statistics, Stars, The Planets, Optics, Electricity and Magnetism, Quantum Mechanics, Experimental Physics  **Year 3 Modules:** Concepts in Condensed Matter Physics, Galaxies, Numerical Methods, Project, Interior of the sun, Space Plasmas, Probing Atoms and Molecules, General Relativity and Cosmology, Project(Continuation from first semester),The solar Atmosphere & Heliosphere  Year 4 (Masters- September 2019- September 2020, University of St Andrews, Astrophysics, Pass): Extragalactic Astronomy, The Physics of Nebulae and Stars 1, Astrophysical Fluid Dynamics, Gravitational Dynamics and Accretion Physics, Stellar Physics, Astrophysics Research Project (MSc), Observational Techniques in Astrophysics, Research Skills in Astrophysics |  | **Overview.**  Overview to be added here by RM. Leave this section.  **Skills.**   * Python * Excel * Self-sufficient * Curious * Analytical * Knowledgeable * Perseverant * Research * Add skill 9 * Add skill 10 * Add skill 11   **Certifications.**   * Data Science: R Basics * Add cert 2 * Add cert 3 |