

STEPHEN CHARLES

OVERVIEW

Proficient Python programmer ([dataSciencePortfolio](#)) ([Blog](#)) with a background in mathematics and computer science. Particular expertise in managing software pipelines and large data sets involving time series analysis and machine learning algorithms, in addition to interpersonal skills from a range of hospitality roles.

ACADEMIC WORK EXPERIENCE

AUTUMN 2018 The University of Singapore

EXPERIENCE Obtained a scholarship to study a crash course in Korean language for 5 weeks and to learn about the culture and history of the changing landscapes of Singapore. Upon completion, applied to spend the Autumn semester here successfully.

JULY 2017 Department of Physics, The University of Nottingham

EXPERIENCE I began, on a voluntary basis, promoting physics via social media which eventually evolved into a paid role in which I mediated with events staff in the department to ensure successful participation. Part of the role was ensuring inclusivity, and how best to target minority groups.

JULY 2014 Space Research Centre, The University of Leicester

EXPERIENCE During my first college year I gained work experience at the University of Leicester Space Research Centre, assisting in the development of an astrobiology rock-sampling tool called SPLIT for use on Mars.

EMPLOYMENT

2019 – 2020 Facebook – London - Remote

POSITION *Data Scientist, Analytics Intern*

DUTIES Performed large-scale data analysis to extract useful business insights. Identified the ones which were actionable, suggesting recommendations, and influenced the direction of the business by communicating the results to cross-functional groups. Classified leads so that the team could work on the most valuable cases, and suggested improvements in the tools and techniques to help scale the team.

2016 – 2019 Starbucks – Nottingham

POSITION *Barista*

DUTIES Memorising a complete menu to an accurate standard whilst simultaneously being adaptable to modify to suit an individual customers needs. Teamwork was encouraged here, and as work load increased each person was dedicated a role to ease each others workload and increase production.

COMPUTER SKILLS

LANGUAGE	Python, C++, L ^A T _E X
PACKAGES	Numpy, Pandas, SciPy, AstroPy
ML PACKAGES	Sklearn, Tensorflow, PyTorch
WEB	HTML, Markdown
SCIENTIFIC	Matlab, R, Fortran, Mathematica
SOFTWARE	Microsoft Office, Tableau, Blender
SYSTEMS	Linux, Windows, Mac

AWARDS AND QUALIFICATIONS

2021	Kaggle: Intermediate ML
2021	Kaggle: Intro to ML
2020	Tableau Desktop Specialist
2016	Full UK Driving Licence
2015	Grade 8 Violin

PUBLICATIONS

AUTHOR	-
CO-AUTHOR	Hayes, J J C , E Kerins , J S Morgan et al. (2021) “ TransitFit : an exoplanet transit fitting package for multi-telescope datasets and its application to WASP-127 b, WASP-91 b, and WASP-126 b”, 1–14.

EDUCATION

2021 – 2023	Data Science with Placement , <i>University of Bath</i>
MSC	Master of Computer Science
RESEARCH	Modules include Machine Learning, Reinforcement Learning, Neural Networks.
2020 – 2021	Astronomy and Astrophysics , <i>University of Manchester</i>
MSC	<i>Distinction</i> , Master of Physics
RESEARCH	Used python to solve the issue of big data in astronomy using packages such as numpy/pandas/astropy/scipy/sklearn/tensorflow. Published a program to facilitate data acquisition and analysis automatically dubbed firefly , which adopts a machine learning approach to find best fit variables called TransitFit , of which I am a contributor.
2016 – 2020	Mathematics with Computer Science , <i>University of Nottingham</i>
MMATH	<i>Upper Second-Class Honours</i> , Master of Mathematics
RESEARCH	Dissertation involved working with python to numerically solve spherical cavitation bubble collapse.
2014 – 2016	Space Engineering , <i>Loughborough College</i>
A-LEVELS	<i>Mathematics A* · Further Mathematics A · Physics A · Engineering A</i> A specialised course with guest lectures at the Space Centre in Leicester.
2009 – 2014	Secondary School , <i>Loughborough College</i>
GCSE's	<i>Mathematics A* · Further Mathematics A · Physics A · Biology B · Chemistry B · English A · English Literature A · Astronomy A</i>

POSITIONS AND RESPONSIBILITIES

2018 - 2019	Mature Student Mentor , UoN	2017 - 2018	Ambassador , UoN
	I was a point of contact for mature students, helping them settle in and be there is a support capacity.		I presented, and gave advice to prospective students.

PUBLIC SPEAKING

2017	Department of Physics , The University of Nottingham
	Gave introductions to guest speakers and shout outs in lectures to ensure everyone is informed of important events.
2014	Space Research Centre , The University of Leicester
	Presented my findings to a crowd of 50 post doc students and an astronaut! My presentation was based on exoplanet research and the feasibility of alien civilizations to be space faring.

VOLUNTEERING

2017	Magical Maths – Nottingham
ROLE	Organisation of weekly sessions to promote mathematics to primary school children, in line with the national curriculum.
2016	Workaway – Ghana
ROLE	I volunteered at a remote school in Africa for a turn of 2 months, to teach those with no access to maths the fundamentals. I managed to organise a bus to take everyone attending to places of historic interest, and demonstrate how the maths they had learned in the classroom has real impact and use to the world around them.

INTERESTS

PHOTOGRAPHY	Avid adventurer and keen astronomer. This hobby pushes the boundaries of my interest in both.	MUSIC	Self taught Guitar, Piano, Violin.
		GENERAL	Science fiction and anything spacey.
HIKING	Surviving extreme conditions makes me feel alive.		