

I'm a proficient data scientist with a background in chemical engineering expertise in managing machine learning pipelines with large data sets involving time series analysis, reinforcement learning and NLP, with the addition of interpersonal skills from a range of hospitality roles. Please do take a look at my [Portfolio](#) for examples of my previous projects.

## EMPLOYMENT

<b>JUN – SEP 2021</b>	<b>Aircraft Career Development Association</b> – <i>Taiwan, Remote</i>
POSITION	<b>Internship trainee</b>
DUTIES	<ul style="list-style-type: none"> <li>• Understand the principles of aircraft safety and the materials on different parts of the aircraft.</li> <li>• Perform maintenance on a different part of the aircraft such as fuse replacement and spark plug replacement.</li> <li>• Thorough knowledge of the aircraft systems and analysis of weather reports for aircraft navigation.</li> <li>• Remote working in an agile, communicative, and self-directed manner as part of a collaborative, interdisciplinary, diverse, and geographically-dispersed team.</li> </ul>
<b>JAN – APR 2021</b>	<b>Bank of Taiwan SA Branch</b> – <i>South Africa, Johannesburg</i>
POSITION	<b>Intern</b>
DUTIES	<ul style="list-style-type: none"> <li>• Supporting and understanding operations in a commercial bank, especially in loan businesses including international syndication loans and bilateral loans.</li> <li>• A complete understanding of obtaining credit/loan facilities from commercial banks.</li> <li>• Performed analysis of financial statements, including income statements and balance sheets.</li> <li>• Completed a certification for FAIS RE5 examination on the legislation of Financial Service Provider in South Africa.</li> </ul>

## EDUCATION

<b>OCT 2021 – 2022</b>	<b>Data Science</b> – <i>University of Bath</i>
MSc	<i>Distinction, Master of Computer Science</i>
STACK	<i>Python, SQL, Pytorch, Keras, Tensorflow, Sklearn, Numpy, Pandas, Matplotlib, Seaborn</i>
DISSERTATION	<b>Using random network distillation and Reinforcement Learning algorithm in Atari games, Reinforcement Learning</b>
	The aim was to explore and combine existing reinforcement learning algorithms without sacrificing the original features of the environment given. The algorithm is then compared with other stochastic and deterministic reinforcement learning algorithms and models.
MODULES	<b>Statistics for Data Science</b> - Probability and statistics, with a focus on translating real-world problems into a mathematical framework in data science contexts. <b>Machine Learning</b> - Covered both supervised and unsupervised machine learning algorithms from <a href="#">Bishop</a> , including how to develop, evaluate and deploy trained models. The second semester involved advanced techniques focused on neural networks with both regression and classification. <b>Reinforcement Learning</b> - Implemented various agents to solve environments from <a href="#">Sutton &amp; Barto</a> , including Dynamic Programming, Temporal Difference and Deep-Q Learning. <b>Bayesian Machine Learning</b> - Implemented approaches such as Bayesian inference, importance sampling, Monte Carlo, and confidence interval predictions. <b>Applied Data Science</b> - Implemented various pre-processing algorithms on data sources and conducted summarisation and exploratory analysis, application of statistical and machine learning models. <b>Software Technologies for Data Science</b> - Covering relevant general computing practices and programming language for data science, as well as the use of data structures, database systems, and software technologies for scalability, from the viewpoint of both storage and computation.
<b>SEP 2016 – 2020</b>	<b>Chemical Engineering</b> – <i>Heriot-Watt University</i>
BEng	<i>1st Class Honours, Bachelor of Engineering</i>
STACK	<i>MATLAB, VBA, Arduino C, Aspen Plus, Aspen HYSYS</i>
FINAL PROJECT	<b>Creating sustainable alternative: Air to jet fuel, Design Project</b>
	The aim was to explore an alternative solution to sustainable jet fuel using several combined technologies such as Carbon capture and storage and Fischer-Tropsch process. The solution was an attempt to solve the carbon tax imposed to the aircraft industries and it was presented to ExxonMobil.

## GENERAL TECH STACK

LANGUAGES	Python, C++, SQL, L <sup>A</sup> T <sub>E</sub> X
PACKAGES	Numpy, Pandas, SciPy
ML PACKAGES	Sklearn, Tensorflow, PyTorch
DATA VIZ	Tableau, Seaborn
SCIENTIFIC	Matlab, R

## LANGUAGES

- English: Native/Professional
- Mandarin: Native/Professional
- Taiwanese: Fluent

## TECHNICAL SKILLS

- **Mathematical Modelling and Optimisation:** Modelled a wide range of complex systems in my data science degree.
- **Python:** Intermediate. All of the modules in data science including reinforcement learning and Bayesian machine learning use this particular language. Competent with libraries including Numpy, Pandas, Matplotlib, Tensorflow, Keras and Scikit-learn.
- **Microsoft Excel:** Proficient. Completed several analysis projects in both of my chemical engineering and data science degrees. VBA was also used.
- **Microsoft Word, Powerpoint, L<sup>A</sup>T<sub>E</sub>X:** Proficient. Completed numerous projects in both my chemical engineering and data science degrees.
- **Autodesk Fusion 360** Intermediate. A wide range of 3D modelling tools was used to represent the proposed dimension of the design.
- **Aspen HYSYS, Aspen Plus** Intermediate. Simulated the feasibility of the projects through modelling the entire plant system. Many types of equipment were installed in the process flow diagram with essential factors such as mass and energy flow computed.

## ACADEMIC WORK EXPERIENCE

2021 – 2022	<b>Academic Representative of MSc Data Science</b> – <i>University of Bath</i>
ACADEMIC REPRESENTATIVE	Support students and thoroughly communicate with both the director of studies and department of computer science to report any concerning events. Several unbiased surveys were also conducted and feedback was collected about the module of the course. A training course for academic representatives was completed at the start of the first-semester term.
2018 – 2019	<b>Student Ambassador</b> – <i>Heriot-Watt University</i>
STUDENT AMBASSADOR	Collaborating with senior student ambassadors and other student ambassadors for upcoming events. Organise and support groups of newcomers and freshers. Advertise the speciality of the university and advice newcomers who had trouble choosing their course in the university. Look out for suspicious items or personnel who do not belong in the university.

## INTERESTS

HARDWARE	Troubleshooting hardware in laptops allow me to explore and discover new technologies introduced in the market. This hobby pushes the boundaries of my interest further in each disassembly.	MECHANIC	Self taught mechanic on my 150cc moped.
		COOKING	Develop vegetarian and other meat alternative dishes in hope of searching and creating better tasting meat alternative dishes.
ADVENTURE	Exploring the tourist spot such as peaks, lakes and anywhere with hills.	MEDIA CREATION	Experienced in video editing programs to create funny content e.g. Sony Vegas Pro, Windows Movie Maker.

## REFERENCES

NAME	Dr. John M. Andresen	Prof. Susana Garcia Lopez	Dr. Julian Padget
TITLE	Associate Professor	Professor	Professor
EMAIL	<a href="mailto:J.Andresen@hw.ac.uk">J.Andresen@hw.ac.uk</a>	<a href="mailto:S.Garcia@hw.ac.uk">S.Garcia@hw.ac.uk</a>	<a href="mailto:J.A.Padget@bath.ac.uk">J.A.Padget@bath.ac.uk</a>
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