Ian **Berrell**

Data Scientist (Development)

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During the lockdown I have been working on improving my data science skills and statistical knowledge, primarily by coding aspects of data science and AI in Python, R, modern Fortran and Julia. For further coding practice I am updating my excel library of process engineering calculations into python, modern fortran and Julia. I would like to break into data science type work in the future.

Education

Neath Technical College — *Neath, UK*

BTEC HNC Chemical Engineering — *1987*

Bradford University — *Bradford, UK*

BEng (Hons) Chemical Engineering — *1991*

Development Practice

(June 2021 - present day)

In preparation for developing a data science capability, I initially refreshed my mathematical capability in statistics, calculus, and linear algebra.

To commence development of a data science, analytics skill set I have been utilising many informal and online education resources, such as books (ref. Reading list),and you tube videos, in Python, R, Julia, and modern Fortran. For current coding practice I am updating my excel library of process engineering calculations into Python, modern Fortran and Julia.

I have been utilising github for version control in all of my coding practices and projects.

For future static and dynamic websites and content development. I am working on increasing my web development capabilities. I am also curious to learn more on Optimisation, Machine learning, Natural language processing, Big data (Hadoop) Quantum computing, and cloud based parallel computing applications in julia and modern Fortran (docker& Kubunetes).

Reading List

1. Wickham, H. (2016). *ggplot2 elegant graphics for data analysis*. o'Reilly.
2. Wickham, H. (2021). *Mastering shiny build interactive apps, reports & dashboards powered by r*. o'Reilly.
3. Ullman, L. (2018). *PHP and MySQL for dynamic web sites*. Peachpit Press.
4. Sutor, R. S. (2019). *Dancing with qubits*. Packt>.
5. Spiegelhalter, D. (2020). *The art of statistics learning from data*. A Pelican Book.
6. Shaw, Z. (2013). *Learn python the hard way*. Addison Wesley.
7. Rhys, H. I. (2020). *Machine learning with r, the tidyverse and mlr*. Manning.
8. Poulton, N. (2020). *Docker deep dive*. Amazon.
9. Nixon, R. (2018). *Learning PHP, MySQL & JavaScript with JQUERY, CSS & HTML5*. o'Reilly.
10. Morales, M. (2020). *Grokking deep reinforcement learning*. Manning.
11. McNicholas, P. d. (2019). *Data science with julia*. CRC Press.
12. Loredo, R. (2020). *Quantum computing aith python and IBM quantum experience*. Packt>.
13. Kepner, J., & Jananthan, H. (2018). *Mathematics of big data*. The MIT Press.
14. Grus, J. (2015). *Data science from scratch*. o'Reilly.
15. Geron, A. (2017). *Hands-on machine learning with scikit-learn & tensorflow*. o'Reilly.
16. Garrett Grolemund, H. W. &. (2017). *R for data science import, tidy, transform, visualise, and model data*. o'Reilly.
17. Duckett, J. (2011). *HTML&CSS design and build websites*. John Wiley & Sons, inc.
18. Duckett, J. (2014). *Javascript&JQuery interactive front-end web development*. John Wiley & Sons, inc.
19. Curcic, M. (2020). *Modern fortran*. Manning.
20. Burkov, A. (2019). *The hundred-page machine learning book*. Andriy Burkov.
21. Burkov, A. (2020). *Machine learning engineering*. Andriy Burkov.
22. Boudreau, P. (2019). *Applying artificial intelligence to project management*. Amazon.
23. Boudreau, P. (2020). *How the project management office can use artificial intelligence to improve the bottom line*. Amazon.
24. Bernhardt, C. (2020). *Quantum computing for everyone*. The MIT Press.
25. Belyadi, H. (2021). *Machine learning guide for oil and gas using python*. Gulf Professional Publishing.