Hao **Wu**

Data Scientist

Argus Media

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Employment

Argus Media

Data Scientist — *Jan 2022 - Present*

- Successfully delivered £250,000 web-based solution for Kuwait Petroleum International (KPI), a major European transport fuel supplier
- Building production ready Shiny dashboards for commodity traders using {golem} framework
- Building custom Shiny inputs using JavaScript to enhance user experience
- Manage user permission and data storage with MySQL and AWS S3
- Contributing to the data preparation pipeline that feeds into the models forecasting commodity prices and distribution

Ricardo Energy & Environment

Senior Data Science Specialist — *Jan 2020 - Jan 2022*

- Building R Shiny applications integrated with SQL database for data checking and ratification
- Building bespoke R packages to simplify the process of data analysis
- Using regression and tree based statistical models to predict air quality trends
- Building Python CLI tool to scrape and compare data from XML files

Ricardo Energy & Environment

Data Science Specialist — *Apr 2017 - Jan 2020*

- Mentoring staff on doing data analysis in R
- Dynamic reporting, data visualisation and building tools for analysing air quality data

Education

University of Edinburgh, UK

Ph.D. — *2017*

- Understanding the spatial-temporal variability of urban air pollution
- Dispersion and statistical modelling of urban air pollution
- Conducting air quality measurements using stationary and portable air quality monitors.

University of Edinburgh, UK

BSc (1st Class) — *2013*

- Environmental and Sustainable Chemistry

South China University of Technology, China

BSc — *2013*

- Applied Chemistry

Teaching Experience

2019	Teaching assistant at Ricardo openair and R data analysis training course	*Ricardo Energy & Environment*
2014	Second Year Physical Chemistry Lab Demonstrator	*University of Edinburgh, UK*
2014	Second Year Environmental Chemistry Lab Demonstrator	*University of Edinburgh, UK*

Techinal Skills

Programming Languages

Proficient	R, MySQL, HTML, CSS
Intermediate	JavaScript, Python

Honours and Awards

2016 Reviewer of Environmental Pollution Journal
2013 Edinburgh Global Research Scholarship
2013 Undergraduate Research Project Prize

Publications

1. Lin, C., Masey, N., Wu, H., Jackson, M., Carruthers, D. J., Reis, S., Doherty, R. M., Beverland, I., & Heal, M. R. (2017). Practical field calibration of portable monitors for mobile measurements of multiple air pollutants. *Atmosphere*, *8*(12). https://doi.org/10.3390/atmos8120231
2. Kenagy, H. S., Lin, C., Wu, H., & Heal, M. R. (2016). Greater nitrogen dioxide concentrations at child versus adult breathing heights close to urban main road kerbside. *Air Quality, Atmosphere & Health*, *9*(6), 589–595. https://doi.org/10.1007/s11869-015-0370-3
3. Wu, H., Reis, S., Lin, C., & Heal, M. R. (2017). Effect of monitoring network design on land use regression models for estimating residential NO2 concentration. *Atmospheric Environment*, *149*, 24–33. https://doi.org/10.1016/j.atmosenv.2016.11.014
4. Wu, H., Reis, S., Lin, C., Beverland, I. J., & Heal, M. R. (2015). Identifying drivers for the intra-urban spatial variability of airborne particulate matter components and their interrelationships. *Atmospheric Environment*, *112*, 306–316. https://doi.org/10.1016/j.atmosenv.2015.04.059
5. Steinle, S., Reis, S., Sabel, C. E., Semple, S., Twigg, M. M., Braban, C. F., Leeson, S. R., Heal, M. R., Harrison, D., Lin, C., & Wu, H. (2015). Personal exposure monitoring of PM2.5 in indoor and outdoor microenvironments. *Science of The Total Environment*, *508*, 383–394. https://doi.org/10.1016/j.scitotenv.2014.12.003