University of Hertfordshire Alumni Association

Doug Weights

BSc(Hons) Astrophysics / Geology, 2004

MSc Research, Astrophysics, 2005

PhD Astrophysics, 2009

Front Office Quantitative Developer, BP

Starting off in academia

After having studied Astrophysics, Doug decided to further his interests in this field. To check whether this was something he really wanted to pursue, completing his MSc by Research in Astrophysics was the first step. *'I was researching brown dwarfs in star-forming regions, using near-infrared data from the Hubble Space Telescope and from the GEMINI North Telescope in Hawaii. I found the research extremely interesting, so I decided to apply for a PhD studentship.'*

Soon after completing his studies he applied for a post-doctoral position as part of an international collaboration studying rocky planets around cool stars (RoPACS). *'The role provided a more diverse set of responsibilities which included research, lecturing and web-development for the network.'* However, after a year of working, Doug's career in astronomical research came to an end due to family commitments.

Moving into industry

Doug later decided to move into the financial sector with the intention to look for a technical challenge. He knew that there was a requirement for individuals to be able to write and implement numerical models in order to solve a wide range of business problems. An opportunity which combined the skills of a developer and an analyst arose within BP and he was offered the job as Front Office Analyst Developer. '*My primary role was to support derivative traders working in the UK, USA and Singapore. I was in charge of implementing complex numerical models and supporting a wide range of Excel spread sheets used for trading commodities.'*

Since joining the company, Doug progressed to Quantitative Developer. '*I now work closely with quantitative analysts, helping them maintain and develop their core pricing library.'*

'I am often asked to solve a problem someone has encountered in a spread sheet or a trading system which has to be solved very quickly. I use a wide range of technologies in my role including C++, VBA, Python, and MATLAB together with a variety of scripting languages.'

For Doug, his ability to develop a bespoke library which centralised all calendar logic in the Front Office has been one of his highlights. This has helped save the business time and money and has reduced operational risk by ensuring data used by different teams is consistent.

Advice and further plans

Numerical, problem solving and analytical skills that Doug developed during his studies helps him read and understand complex literature in his role today. *'All IT skills I learned at university, including the use of software and programming techniques, are extremely useful to me on a daily basis.'* Doug advises current students to focus on modules that provide experience in numerical programming. *'For alumni, I'd also recommend participating in free online/massively open online courses (MOOC) focusing on unfamiliar concepts.'* Doug aims to build up his management skills to eventually lead a team of people; he'd also like to move closer to the business as he continues to improve his financial and technical knowledge.

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