



INTERVIEW

Attila Balázs Principal Consultant – Machine Learning Specialist

Sword Venture & Data Science

How did you end up working for Sword Venture?

I initially joined Sword Venture in 2013 where I helped to automate processes using the latest technologies and developed a line of business applications and database solutions alongside colleagues. I joined Sword Venture because of the opportunities they presented to me with working in a variety of Oil and Gas customers while still having the opportunity to grow and develop my talents.

Tell us a little about your role at Sword Venture?

I have been a Principal Consultant here at Sword Venture for a little over a year. I am working closely with customers to establish data science capability, enabling delivery of machine learning initiatives. I am working mainly across subsurface, identifying where in the business we can use Data Science to achieve its objectives. I am part of the team developing the Innovation Hub in Venture and have helped develop the Data Science community in BP.

What do you enjoy most about your role and working for Sword Venture?

I find my current job really exciting, as it lets me see across the organisation. I can then experiment with novel approaches, where we are trying to get the most out of the data. The most exciting bit for me is making predictions. I find it fascinating that with the data and the techniques, we can potentially predict the future. An event, a change or what future values might be, such as pressure, production or daily flow rates – It keeps me motivated!

Do you think there were key skills you had learned over the years that helped you do Data Science?

Yes, for sure. Data Science is a combination of different skill sets, software engineering, statistics & mathematics and domain expertise. It is highly unlikely a Data Scientist is an expert in all domains. For example, I had a good software engineering background, could make databases and write lots of code. I had to brush up on my statistics, linear algebra etc. The domain knowledge I had, through OMV Petrom in the past and Venture over the last 6 years. There are other profiles of Data Scientists. In one of our Customers we have Data Scientists who are petrophysicists, and who understand the maths. However, they are beginning to pick up and develop on the coding side.

How did you get started with Machine Learning?

I started looking into this stuff as a hobby first, in my spare time at home. My background is building software development, applications and databases. I started looking more into this and what else can we do with data. How can we extract information from it and do more with data. I started experimenting in my daily work, seeing where I could apply the techniques. In 2016, I had the opportunity to apply some of the techniques in my work. We had a large volume of documents coming in from the field, and using a rule based approach was quite overwhelming. I thought I could perhaps apply a classification algorithm with machine learning to solve this problem, started testing it and it built up from there.

Was the classification of documents successful?

Yes, very successful. I was the one looking after the document management process so it made my job much easier. I presented it to the internal Community of Practice at BP, and it was very well received. Then I started having lots more people asking questions about the work I had done. This led to me eventually focussing 100% on data science. We are now looking at over 50 different projects across the business, that we hope to develop and deploy as solutions.

For anybody wanting to get involved in Data Science, how do you recommend they start?

There are a couple of things. First of all, they should figure out what motivates them. Why do they want to do this? It is a lengthy process, learning continuously. Always look out for the new things coming out and adapt, it's very fast changing. I then suggest go online and learn, YouTube for example, great for conferences and talks. You can go to meetups in London, for example there are two or three a week – Get involved in the community! Then perhaps start doing some online courses to get some of the basics. Get familiar with the concepts and the language of Data Science then I recommend that you have a 'pet project' – Get a data set and just work on a project.



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Let's Get Personal.....

What is the most exciting project you have ever worked on??

I am currently working on a very exciting project where I use Computer Vision and Deep Learning. We are currently in stealth mode but will be sharing details in future. The most exciting projects are the ones where I can challenge myself, learn something new while also having a positive impact on the business.

What is the best piece of advice you have ever received?

"if you cannot explain it in simple terms you don't understand it" comes to mind I got this advice from my parents, and I always keep it in mind when I am explaining data science concepts, do I understand it enough to be able to cut through the jargon and explain it in simple terms.

I also came across a quote from Richard Feynman which is similar "if you cannot create it you don't understand it" which adds to the advice above and takes it further, you only really understand something if you can explain it to someone in simple terms and can re-create it. Sounds simple but it can be challenging. Next time you learn something new ask yourself do I really understand it or do I think I understand it.

What is your ultimate, go to gadget or app?

I have an unhealthy obsession with books, one of my most used apps is Audible which allows me to listen to books all the time. I keep increasing the speed at which I listen to books currently at 1.4x one of my friends can do 2x. Remember the matrix when they just upload karate knowledge to Neo's mind, that would be the ultimate app, when can we have that ?

If you could have dinner with two famous people (dead or alive), who would choose and why?

I would like to have lunch with John von Neumann and Alan Turing at the Institute of Advanced Studies in Princeton, maybe Claude Shannon can drop in for coffee. I would just sit there quietly and listen to them discussing maths, computing and information theory.

If you were on a desert island and you could only have three items with you, what would you choose?

I would take some sunscreens and a couple of books.

What's your favourite pastime?

I try to be outside, especially when the sun is shining. I like the fresh air! I enjoy hiking, long distance walking (usually 26 miles or more – once a year 50 miles! My goal is 100 though) and running – Spending time enjoying the English countryside!

Where do you prefer best your home town or England?

England and being close to London is great I really enjoy the work environment and diversity here and as mentioined above long walks exploring the countryside.

I left my home town Targu Mures which is in the middle of Transylvania a long time ago, I go back as often as I can to see family and friends, Christmas celebrations are a must there. I also spent 7 years in Bucharest studying and working for the Romanian oil company (Petrom) and have a lot of friends there, during this time I also got to spend some time in Vienna.

Three words that best describe you:

Does not compute

Atti has developed a pathway to Data Science... contact us if you would like to receive a copy.