

Data Science Case Study

Data Science Readiness Training

Mosaic built and delivered a custom data science training program for a leading oil & gas firm.



Industry

Oil & Gas



Use Case

Data Science Readiness
Training



Techniques

Machine Learning,
Analytics Adoption & Scale



Outcome

Data science team now
identify and lead projects
across the business

BACKGROUND

The client, one of the largest oil and gas manufacturers and commodity marketers in the world, felt they had the right people in place to develop an internal data science capability. The company had been collecting mass amounts of data for a very long time, but lacked the skill-sets to develop business cases and produce results with the data.

As data collection technologies develop, companies have access to information they previously never had. Companies need to start data mining and acting upon the predictive insights they develop, or else they are wasting resources on housing information in databases, spending time and money while gaining no insight into their business.

The company formed a group of 13 business solution advisors, whose main focus was to receive requirements from whichever line of business they were assigned to (upstream, downstream, production, marketing, etc.) and provide a data-centric solution to the question or issue. The company had invested hundreds of millions of dollars in data mining technology and believed their infrastructure was complete.

OBJECTIVES

The oil and gas client realized they needed their team to be able to start taking advantage of their data assets. They wanted their team to be able to identify areas around the business where they could use data science and predictive analytics to improve their decision making. They realized they needed the expertise of an analytics consulting firm.

Mosaic, as a data science consulting and analytics consulting firm, was asked to deliver training that would bring everyone on the analytic solution team to the same knowledge level. Once the team had a base level of knowledge, they could begin to apply predictive analytics and optimization techniques to the business challenges.

The goal was to insure that solution advisors and solution engineers were well versed in mathematical and data lingo to develop actionable analytics solutions that would bring high impact results.

APPROACH

Having been in the data science consulting and data analysis consulting business for more than a decade, Mosaic knows a thing or two about data mining and data science. They have seen what works and what doesn't work. Mosaic developed, in conjunction with the customer, a four-day training program that focused on business case development, data science theory, managing a data science project, and model development and implementation.

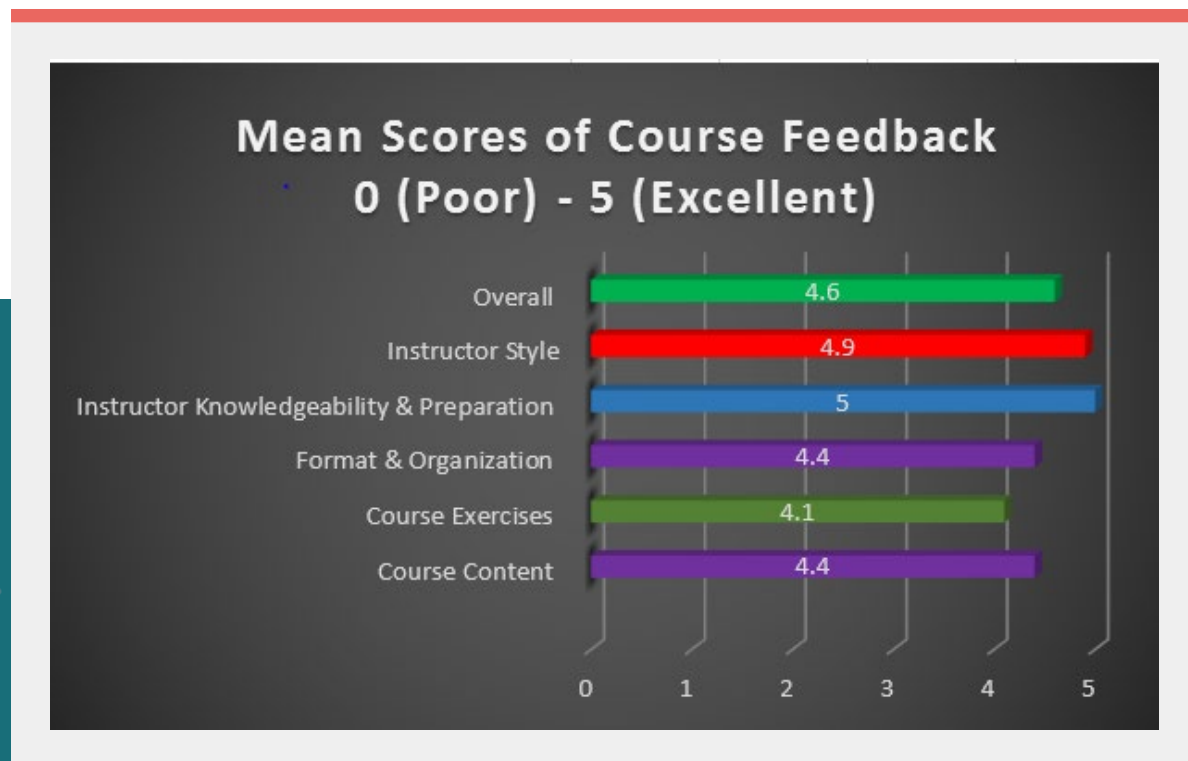


RESULTS

The team is now able to understand what is possible with data science and where it can be most effective. This gives them an incredible competitive advantage in today's landscape, as well as saving them millions on their bottom line.

The analytic solution advisors now have a common terminology and approach to developing use cases and working through the data science process. They are now seen as experts and a bridge between IT and the lines of business.

Mosaic handed out a survey at the end of the training to receive feedback from the twelve participants.



Course Content – “Loved the discussion & theory the most” “Topics were relevant in business world as well as provided a good glimpse of advanced/scientific analysis”

Format & Organization – “Good format, well balanced” “Well organized and well presented, flows well”

Instructor Knowledgeability & Preparation – “Impressive educational and practical experience” “Ridiculously smart”

Instructor Style – “Good presenters” “Incredibly well prepared instructors”

Overall Course Rating – “Good class, very dense in material” “Would highly suggest to others”

TECHNOLOGIES INVOLVED

Mosaic trained the participants on [R](#)¹ and the [RStudio](#)² integrated development environment (IDE). Technical exercises leveraged some of the powerful statistical and machine learning packages available from the CRAN repository.

Endnotes

1. <https://mosaicdatascience.com/tag/r/>
2. <https://www.rstudio.com/>

