

**Valerie du Preez**, actuary and founder of Actuartech, and **Andrew Oakley**, head of LMA Academy at Lloyd's Market Association, explain how they joined forces to modernise Lloyd's analytical capabilities through programming skills



**W**ith pressure on insurers to analyse increased volumes of data at increased speed and reduced cost, the need to build data science skills and technologies is growing.

The LMA Academy, an initiative by the Lloyd's Market Association (LMA), has partnered with Actuartech, a specialist data science training provider, to provide training market-wide that addresses the skills gap.

### Modernising Lloyd's analytical capabilities with Python

Digitisation and automation are essential to Lloyd's journey to modernise analytical capabilities and tackle high expense ratios.

For actuaries, in particular, programming skills could help build improved predictive models that enable insurers to price and manage risks more optimally.

Python can assist in the organisation and analysis of data and automation of manual tasks, which allow more

## LLOYD'S MARKET ASSOCIATION

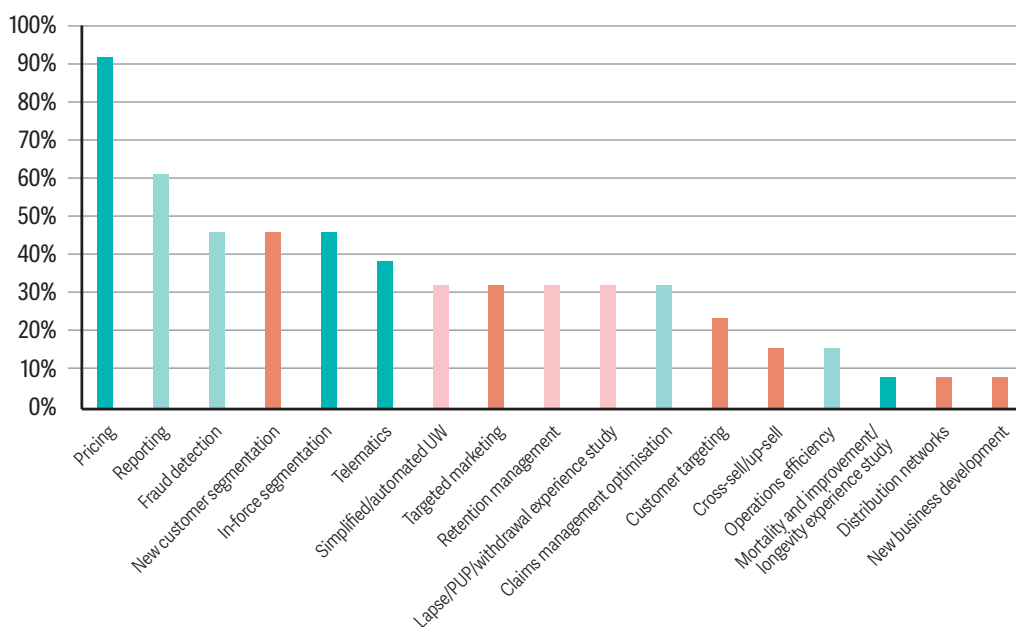
The LMA exists at the very heart of Lloyd's. All 51 Lloyd's managing agencies and all Lloyd's members agents are members of the LMA. We represent our members' interests to organisations including governments, regulators and the Corporation of Lloyd's. We provide professional and technical expertise in areas ranging from model policy wordings to the implementation of innovative technologies. We operate the market's most comprehensive technical education service, the LMA Academy. **For more info** Visit: [www.lmalloyds.com](http://www.lmalloyds.com)

## ACTUARTECH

Actuaritech provides you with the tools and training material to embrace data science through training and consulting on actuarial topics, including data management, data visualisation, predictive analytics and IFRS 17. We help teams to identify and solve data-specific challenges by combining state of the art data and technology with our business expertise. **For more info** Visit: [www.actuaritech.com](http://www.actuaritech.com) Email: [info@actuaritech.com](mailto:info@actuaritech.com)

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**FIGURE 1:** Data science use cases in non-life companies retrieved from 'Beyond Theoretical Data Science: A Benchmarking of Actuarial Departments'. These are responses to the question 'Please describe how you are using data science or planning to use it in your function', posed to actuarial teams.



KEY: ■ Marketing and sales ■ UW / policy admin ■ Pricing and reserving ■ Claims mgt and operations

time for value-adding activities. It has powerful data analytical, statistical, and machine learning capabilities. Knowledge of Python can also help to identify opportunities for improvements in processes, systems and techniques.

### Focused training

The LMA engaged Actuaritech to provide focused Python sessions to the first Lloyd's Market Foundations in Python cohort. The hands-on, practical training designed for a technical audience (with reference to actuarial and analytical examples) was combined with a simulation of a real-world end-to-end investigation.

This took delegates, working in teams, from the problem statement through data management and model building to reporting, and ended with a panel presentation to help bridge the interpretation and communication gap sometimes found between the technical teams and management.

That approach led to a very successful introductory programme. Panellists included senior management representatives across the market, who stated that, aside from the presentations being

“enjoyable and informative”, it was quite clear that “the delegates collaborated well and had developed and advanced their Python skills as a result of the course”.

“It was clear to us that delegates enjoyed learning Python, that they had acquired new skills by the end of the course and that they were able to apply them in a practical context,” said Andrew Oakley, head of the LMA Academy. “As a membership body, we provide professionals across the market with the technical skills needed to succeed in the coming years and decades. We were pleased this partnership with Actuaritech delivered just that.”

The programme was aimed at individuals and teams in the Lloyd's market who wanted to start coding in Python, and the skills gained could support with multiple case studies, including:

- Data cleaning
- Automation of data management tasks
- Integration of different technologies
- Machine learning and predictive analytics
- Regression analysis
- Visualisation and reporting
- Future-proofing the Lloyd's market.

“By providing Python capabilities, we can help today's actuaries become the tech enabled professionals of the future.”

The analytical skills and expertise of the Lloyd's market, together with programming capabilities in Python, can help the Lloyd's market remain relevant in a digitally oriented environment. The actuary of the future will use data science in everyday work. By providing Python capabilities, we can help today's actuaries become the tech-enabled professionals of the future.