

## DATA SCIENCE



Program fees:

3,500 €

10% discount for TUM Alumni

### Content

“Data science” introduces modern computational tools to manage, process, and visualize data and to communicate their results. This comprehensive program combines the latest research results with findings and challenges from practice. Participants will learn about fundamental statistical principles, broadly useful statistical methods, state-of-the-art prediction methods from machine learning, and optimization and randomization tools that help them to tackle large-scale data-analytic problems.

Our experienced lecturers demonstrate the relevance of the developed skills in selected application examples. The hybrid format combines networking opportunities on-campus with digital elements.

### Target Group

Professionals that wish to develop or deepen existing expertise in Data Science, as they e.g. currently hold or wish to gain a position as Data Scientist/Analyst in Consulting, Finance, Insurance or Tech Sectors, among others.

### Requirements for entry

Participants should have an educational background in mathematics, informatics, or a closely related field.

### Why this program?

In 2018, the volume of digital data generated worldwide was 33 zettabyte. In 2025, the number will increase to 175\*. The essential challenge for companies and organizations is more than ever to gain knowledge out of this huge amount of data and to being able to make strategic decisions on this basis. Well-trained data scientists play a central role in this constellation.

This unique certificate program was developed in close cooperation with professors from TUM's Department of Mathematics – one of Europe's leading institutes at the interface of mathematics and its applications. Our experts support participants in building core competencies in Data Science relevant to competition – from developing profound methodological competencies to providing a deep understanding of statistical principles.

\*Source: Statista 2021/IDC: <https://t1p.de/cun7>

### Academic Directors

Prof. Dr. Matthias Scherer  
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Prof. Dr. Mathias Drton  
Chair of Mathematical Statistics, MDSI, TUM

### Contact and further information



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### About the TUM Institute for LifeLong Learning

The TUM Institute for LifeLong Learning supports international experts and leaders from science, business and society to meet the challenges of the 21st century.

Therefore, the Institute offers innovative continuing education courses and thus facilitates scientifically-based and technology-supported professional and leadership development.