



Basic information

- Standard length of the program: 6 semesters
- Language of instruction: English
- Application period: May 01 - July 15
- Second application period for waiting list applicants: August 01 - August 15
- Start of the program: Winter semester (October)

Requirements

- General university entrance qualification or subject-specific university entrance qualification
- Application through the KU application portal

Useful skills

- Good command of the English language
- Passion for mathematics and logical thinking

Application

Information on the application and enrollment process can be found at ku.de/en/application

Further information about the degree program at ku.de/ds

Information on the Mathematical Institute for Machine Learning and Data Science at www.ku.de/en/mids

Information on studying at the KU at www.ku.de/en/study-at-the-ku/learn-more-about-the-ku

For queries about the degree program, career prospects and the application process, please contact:

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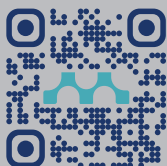
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Bachelor of Science Data Science

ku.de/ds





Recognized top university

most popular university in Germany (StudyCheck 2021 and 2022)



Excellent student-to-faculty ratio

personal mentoring for optimal academic success



Stand-alone degree program

conceived from scratch with courses tailored to the program



Innovative & practice-oriented teaching

consistent incorporation of practical elements into theoretical contents



Ideal stepping stone to a career

excellent career prospects: internship at one of our numerous partner companies and institutions



Wide range of specializations

from theory to applications including the option of choosing a social science focus



Campus in the city of Ingolstadt

Great quality of life and numerous high-tech companies in town



International

Study in English with the option of a semester abroad at one of our many international partner universities

In today's digital world, data is abundant; the challenge is to analyze and exploit this data. Recent advances in artificial intelligence - e.g., in autonomous driving, speech recognition, and automatic translation - show that modern machine learning methods are capable of discovering and harnessing hidden patterns and relationships in large amounts of data.

Features of the Data Science (DS) program

- You will learn the necessary basics of mathematics, statistics and computer science,
- get practical experience in cutting-edge methods for data analysis and machine learning (ML),
- apply these skills using modern software technologies,
- improve your English,
- choose from a number of specializations areas:
 - Applied Mathematics and Scientific Computing
 - Business Analytics and Operations
 - Digital Transformation of Society
 - Environmental Sciences
 - Finance and Economics
 - Machine Learning and Statistics



Well-trained data scientists are in high demand. Graduates of the program can work both methodologically (e.g. as a data scientist or as a software engineer) and strategically (e.g. as a data strategist) in areas such as

- finance,
- the IT industry,
- the automotive, and
- the biotechnology industry,
- as well as in startups and NGOs.

Furthermore, the program prepares students for a Master's degree with the option of a subsequent academic career in the fields of computer science, statistics, mathematics or in a field of application.

Studyplan

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|---|---------------------------------|--------------------|--------------------------------|----------------------|---------------------|--------------------|
| 1 | Intro. Statistics | Intro. Programming | Information Systems | Linear Algebra I | | Analysis for DS I |
| 2 | Hands-on ML and DS | | Algor. & Datastruc. | Linear Algebra II | | Analysis for DS II |
| 3 | Foundations of Data Science | | Adv. Programming | Intro. Stochastics | Optimization for DS | Focus Area |
| 4 | Foundations of Machine Learning | | DS Lab | Statistical Learning | Studium Pro | Focus Area |
| 5 | Internship | | Ethics for Algorithms and Data | General Elective | General Elective | Focus Area |
| 6 | Bachelor Thesis | | Bachelor Seminar | General Elective | Focus Area | Focus Area |