But wait, there is more...

Industry partnership

Collaboration with industry is tightly integrated with the Master's program. Guest lecturers from our industry partners are invited to share their experience and students have the opportunity to do their coursework and master's thesis on real-world problems and data sets.

Scholarly projects

Each year we offer several 2-year projects where students work under the guidance of a faculty member on a practical or research problem as part of their coursework. Students are provided with financial support and tuition, making these projects an attractive option for international students.

Skill development opportunities

Throughout the year we organize workshops, tutorials, and lectures in the broader area of data science. These are a great way to improve your skills and interact with researchers and professionals.

"Our Master's of Computer and Data Science is a state-of-the-art, intensive, and rewarding program that focuses on equipping students with the theoretical foundations, practical knowledge, and hands-on experience. If you are a student with a technical or mathematical background and you aspire to be a leading data science professional, researcher, or teacher of data science then this program is for you!"

Quick facts:
- 2nd-cycle degree program.
- Open to 1st-cycle graduates.
- Full-time, 2 years, 120 ECTS.
- All courses are taught in English.
- Enrolling EU & non-EU students.
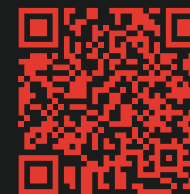
For more information on how to apply visit **datascience.fri.uni-lj.si**.
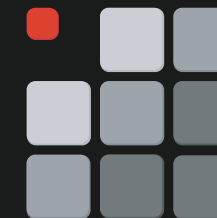
Data Science MASTERS

University *of Ljubljana*
Faculty *of Computer and Information Science*

Curriculum

From Data To Science

Core courses – building the foundation

To be able to work with data, a data scientist must know the tools and best practices for acquiring, storing, exploring, transforming, and analyzing data (**Introduction to Data Science**).

To understand modern quantitative science, data scientists must first master the building blocks: analysis, matrix and tensor algebra, optimization (**Mathematics I & II**), probability – the language of uncertainty, and statistics – how to reason with this uncertainty (**Principles of Uncertainty**).

A data scientist should also be equipped with a broad set of tools for tackling prediction, forecasting, pattern recognition, and other typical analytical tasks (**Machine Learning for DS I**).

And finally, the students can apply these fundamentals to solving a practical problem from research or industry (**Project Course**).
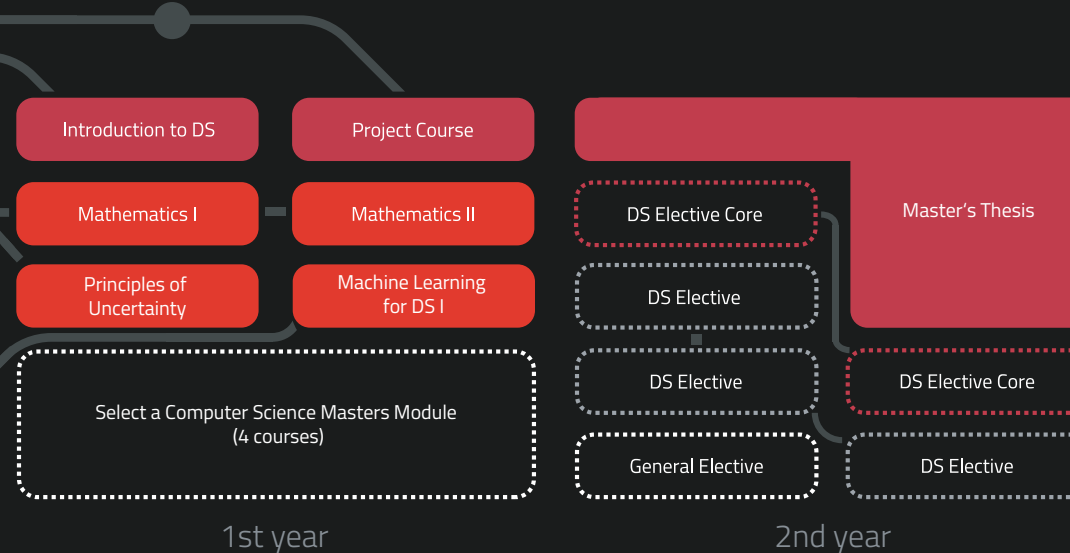
Elective core – getting serious about data science

Machine Learning for DS II
Selected advanced topics, recent developments, and preparation for further study and research in the field of machine learning.

Deep Learning
The family of machine learning methods behind the recent breakthroughs in areas such as autonomous driving, computer vision, and NLP.

Big Data
Non-relational databases, data management, cloud storage, distributed analytics, and other things you should know when the data are just too big.

Bayesian Statistics
Learn probabilistic programming, how to build and apply statistical models, and how to provide statistical support to researchers and professionals.

Electives – what is your favorite subject area

Choose from a variety of courses including Artificial Intelligence, Biometrics, Bioinformatics, Computer Vision, High Performance Computing, Information Retrieval, Natural Language Processing, Network Analysis, and the remaining elective core courses.

1st year

- Introduction to DS
- Project Course
- Mathematics I
- Mathematics II
- Principles of Uncertainty
- Machine Learning for DS I
- Select a Computer Science Masters Module (4 courses)

2nd year

- DS Elective Core
- Master's Thesis
- DS Elective
- DS Elective
- DS Elective Core
- General Elective
- DS Elective