Master Data Science and Entrepreneurship

The best of **TU/e** EINDHOVEN UNIVERSITY OF TECHNOLOGY & TILBURG UNIVERSITY

An interdisciplinary business-technology-analytics program

JADS Jheronimus Academy of Data Science

About this master

Data is everywhere. Whether you buy something online, go to an amusement park or support a charity in order to make the world a better place, just about everything you do adds to the huge volume of data in circulation.

Not only that, but data is also gaining in value. Companies and other organizations use data to create valuable information. That's why there's a growing demand for skilled data scientists who know how to make sense out of the vast sea of data and put it to good use – both effectively and safely.

Our master's program in Data Science & Entrepreneurship is a unique collaborative venture between Eindhoven University of Technology (TU/e) and Tilburg University (TiU) that is designed to produce data science professionals with excellent business skills. The program equips you with the skills you need in order to use data science to develop innovative, value-adding and sustainable activities for all sorts of businesses, from large, established

corporations to budding start-ups. You'll learn how to translate imaginative, data-driven ideas into concrete project requirements,

develop technological solutions, launch a business venture and assess its effectiveness. By the time you have completed your degree, you will have developed a robust scientific perspective combined with a practical business approach that will form an excellent platform for a successful career.
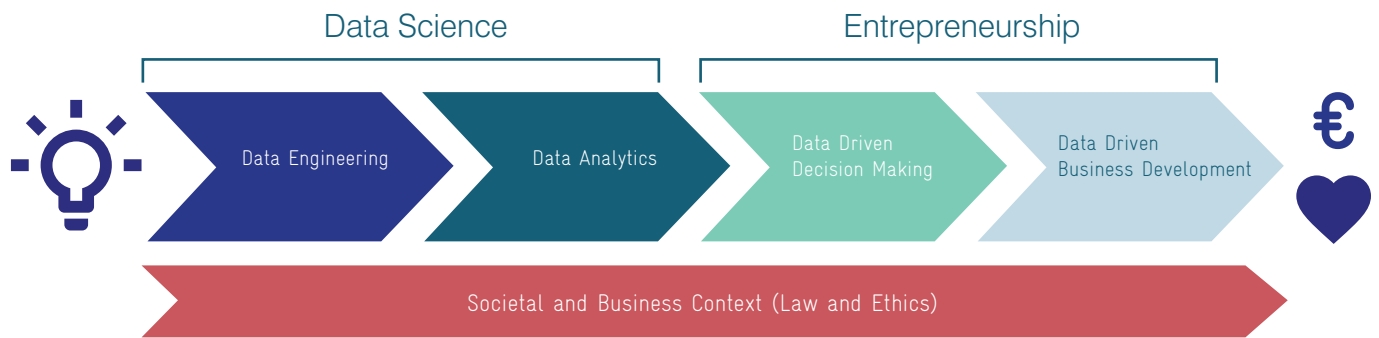
Why choose this Master's Program?

The master's program in Data Science & Entrepreneurship combines TU/e's technological know-how with TiU's business, legal and societal insights. In other words, it draws on the best in theory and practice from two leading Dutch universities. It provides you with a thorough understanding and knowledge of a wide range of techniques at the interface of technology and business – all while taking account of potential social impacts.

Philosophy of the MSc Data Science and Entrepreneurship

Turning data into value

Data Science	Entrepreneurship

Data Engineering → Data Analytics → Data Driven Decision Making → Data Driven Business Development

Societal and Business Context (Law and Ethics)

What makes this master's program so special?

- It's a brilliant combination of business skills and information technology, drawing on the best in theory and practice from two leading Dutch universities.
- It prepares students for a career at the interface of data science and entrepreneurship.
- It's a unique educational experience in an exceptional setting: it means studying and working as part of a small, close-knit community on a dedicated campus.
- Students learn to apply data-driven methods in a multidisciplinary team.
- Strong links with business: an opportunity to gain immensely valuable practical experience from working on real-life cases that involve solving actual business data problems.

- A chance to interact with a wide range of businesses, and to make an impact not just on their own operations, but on the community as a whole.
- Short lines of communication between students and teaching staff based on direct, personal contacts.
- Plenty of opportunities to attend both business and social events on campus,
- Active support and encouragement for students starting a business in a data-driven environment.

The master's program in Data Science & Entrepreneurship is based in the dynamic Marienburg campus in the vibrant Dutch city of 's-Hertogenbosch.

Data Science and Entrepreneurship in short

Start: end of August

Full-Time

EU students: € 2,168
Non-EU: € 15,316

2-years

Den Bosch

Master of Science
Data Science &
Entrepreneurship

" It is a small and approachable community

Max Roeters, Master student "

🏢 About JADS

JADS is a unique cooperation between the Province of North Brabant, the Municipal of 's-Hertogenbosch, Tilburg University and Eindhoven University of Technology academy. By working together, we create a new knowledge infrastructure with which Brabant puts itself at the heart of the future. This happens from the historic Mariënburg convent in 's-Hertogenbosch, which is a newly renovated location with great historic value.

Curriculum

Combining the technological know-how of Eindhoven University of Technology (TU/e) with the business, legal and societal insights of Tilburg University (TiU), the program draws on the best in theory and practice from two leading Dutch universities. The master's program in Data Science & Entrepreneurship is designed to shape you into an all-round data scientist. You will acquire the skills that you need to order to find solutions to business and societal problems – that means passing through the Curriculum entire cycle, from approaching a problem from a data analysis perspective to implementing an appropriate data science solution, while at the same time taking account of its potential legal and social implications.

Each year of this two-year master's program is divided into two semesters. The first runs from September to January, and the second from February to July. Each semester consists of a series of courses, followed by an examination period lasting two to three weeks. The program is divided into the following components:

- 10 compulsory courses (60 EC)
- Three restricted elective courses in the first year (18 EC)
- One elective course in the second year (6 EC)
- A minor program (12 EC)
- A master's thesis (24 EC)

You will be required to choose a minor program consisting of two courses each worth 6 EC. You are also required to take three compulsory courses and one elective courses in addition to this minor program. The master's thesis is completed during the second year.

> **"** What is unique about JADS is their strong connection with the business field and their unique approach to students who want to start a business **"**
>
> Jules de Bruin, Master student

Compulsory courses

See the course descriptions for more detailed information on the compulsory courses:

First year
Semester 1
- Data Entrepreneurship in Action I
- Data Mining
- Data Engineering
- Strategy and Business Models
- Social Network Analysis for Data Scientists

Semester 2
- Data Entrepreneurship in Action II
- Interactive and Explainable AI Design

Second year
Semester 1
- Data Entrepreneurship in Action III
- Intellectual Property and Privacy
- Master's thesis

Semester 2
- Data Ethics and Entrepreneurship
- Master's Thesis

Elective courses

First year
You choose three elective courses from the following options in the second semester of your first year:
- Advanced Data Architecture
- Deep Learning
- Casual Inference for Business Development
- Entrepreneurial Finance
- Prescriptive Algorithms

Second year
You choose one of the following minor programs in your second year:

Minor program in Agrifood
- Data-Driven Food Value Chain
- Servitization and Data-Driven Innovation

Minor program in Crime & Safety
- Cybersecurity
- Data Forensics

A free minor
- Two courses from the minors or electives from semester 1.2 or year 2

You also choose one further elective course from the following options in your second year:
- Super Crunchers
- Real-Time Process Mining
- Natural Language Processing
- Data Visualization

Admission Requirements

Take a look at our admission requirements to find out whether you're eligible for the master's program in Data Science & Entrepreneurship.

Deadlines for enrolment

For the enrolment deadlines please check our website, get in touch with our admissions offficer or sent an email to questions@jads.nl

Premaster's Program

We offer a half-year pre-master's program worth 30 EC by way of preparation for the master's program in Data Science & Entrepreneurship. This preparatory program is intended for those students who have sufficient knowledge of statistics and mathematics, but who are not immediately eligible for the master's program itself.

Starting moment & Application deadlines

The courses of the pre-master's program Data Science and Entrepreneurship start in the first week of February.

Please check de website for the application deadlines.

Career opportunities

The career opportunities for data scientists are endless. The 'Harvard Business Review' dubbed the data scientist as the 'sexiest job of the 21st century'. In other words, your skills will be in exceptionally high demand. A few examples:

- Advanced Analytics Practice Manager
- Business Intelligence & Analytics Lead
- Chief Data Officer
- Consultant Data Concessions
- Data journalist
- Data Scientist
- Data Protection Manager
- Data Regulatory Officer
- e-Health Analyst

And many more...

How to apply?

Master

This Master's program is a joint effort of Eindhoven University of Technology and Tilburg University. Students are free to choose at which university they want to apply: your application is registered by both universities and you will have access to the facilities of all three campuses in 's-Hertogenbosch, Eindhoven and Tilburg.

Dutch students:

Apply through Tilburg University:

tilburguniversity.edu/nl/onderwijs/
masteropleidingen/data-science-and-
entrepreneurship/application

Apply through Eindhoven University:

tue.nl/studeren/studeren-aan-de-tue/
toelating-en-inschrijving/program/
data-science-and-entrepreneurship/
programtype/master/

International students:

Apply through Tilburg University:

tilburguniversity.edu/education/
masters-programmes/data-science-
and-entrepreneurship/application

Apply through Eindhoven University:

tue.nl/en/education/become-a-tue-
student/admission-and-enrollment/

Premaster

It's only possible to be admitted to the premaster's program by applying at Tilburg University. An admission's committee will determine your eligibility for the premaster's program taking into account your eventual eligibility for the master's program.

All students:

Apply through Tilburg University: