TU/e Technische Universiteit Eindhoven University of Technology

Tilburg University

's-Hertogenbosch

Provincie Noord-Brabant

Foundation Data Science for Experts

7 week program

JADS Jheronimus Academy of Data Science

Foundation Data Science for Experts

Big Data and analytics are changing the world rapidly. This unique course prepares you for a leading role in this new reality.

The JADS Data Scientist Foundation program is an introduction program for professionals based on the dual perspectives of the universities of Eindhoven and Tilburg. After the course, participants can continue in the Data Science for Experts program: Level 1 (7 months) or Level 2 (1 year).

A program designed for eager Data Scientists

This 7-day course is targeted at professionals who want to learn to develop machine-learning solutions, and who are also interested to learn the business implications of data science.

Participants have affinity with analytics and IT, and the ambition to learn programming skills.

Chapel in the Marienburg

A solid understanding of Data Science

Upon completion of the program, you have a solid and hands-on understanding of machine learning and data engineering. You will understand the various types of algorithms and how to use them.

You have a good mastery of Python and are capable of implementing it. You will know the value that Big Data and analytics could bring to the organization, and master the skills to translate business goals to data-science questions. You will master the skill to define a good data-science project and translate the work into a logical structure of tasks.

What you will do

Preparation: Depending on your skill level in programming, you may need up to 4 weeks of self-study in an online learning environment where you will learn coding in Python

Introduction: Data science — new forms of data, new analytics and new opportunities. We discuss Big Data, predictive algorithms, machine learning and AI. We discuss typical applications, ranging from data science to make current processes and services more efficient, to new products with smart features, and data and analytics as a basis for new business models.

How does data science work? We discuss data-analytic thinking and the CRISP-DM model for data-science projects. We develop a fundamental grasp of the main steps of a data-science project: translating a business goal to a data-science question, finding and accessing data sources, extracting features from data, training and selecting a machine-learning algorithm, evaluating the performance and deploying the algorithm

in a machine-learning pipeline. We develop and discuss practical implementations of machine learning and data engineering in a Python-based analytics environment.

Orientation: this 7-day program is a primer to the ensuing Data Science for Experts Level 1 (7 months) or Level 2 (1 year). The insights of this Foundation program are designed to help you orientate in the data-science world, and establish your learning goals and career ambitions for your further development in data and analytics.

Teaching methods

Real challenges make learning motivating, help get your organization involved, and are a catalyst to achieving real impact. The program is built around a CRISP-DM data-science project.

Become part of our community

The Mariënburg, a former convent in the historical center of Den Bosch is JADS's home. It's a welcoming, inspirational and atmospheric environment for life-long learning and becoming part of our community, with the former chapel functioning as the main auditorium, and the vast complex offering many surprising authentic details reminiscent of its former function (and housing a large number of data-driven startup companies).

Data scientists are T-shaped professionals

The T-shape visualizes the idea that a successful career is based on the combination of deep technical expertise (the vertical bar) and wide and broad boundary-crossing skills (the horizontal bar).

We develop T-shaped Data Scientist who are both tech savvy and business savvy. Who do understand the technical skills of data engineering and know how to use data-warehouses, build a data pipeline and access Big Data cloud solutions. But who also understand how business models and strategies work, are able to manage data-science projects delivering results, and in general, know what it takes to get things done in large and complex organizations.

Our professors

The program is taught by a combination of senior experts working in business and society, and professors from Eindhoven Technical University and Tilburg University. In the assignments, you are supported by Practitioners who combines an academic affiliation with practical expertise in your sector (professional services, industry, health, supply-chain, energy or public sector).

Prof. dr. Jeroen de Mast

The program's teaching team is headed by Professor Jeroen de Mast. Jeroen is professor of statistics and data science at the University of Waterloo (Canada), Scientific Director at Holland Innovative, and Academic Director of Professional Education at JADS.

Throughout his career, he has combined his academic positions with a career as a consultant and professional trainer in applied analytics and leading transformation processes. Jeroen is an original and scholarly thinker, and an inspirational speaker, with a talent for explaining the essence of matters with much clarity.

Information session

Join our information sessions. Discuss the program and your ambitions with JADS's professors and to get to know your peer cohort. Register at our website.

Contact us

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Changing the world with Data Science

"My world has changed now. I look back on a year in which I gained new insights, new knowledge, met a lot of new people and it made me understand the world better. Especially the world of Data Science. If you want to know why the world is changing and how you can benefit from that, you should definitely study Data Science.."

- Sven van Egmond - JADS Participant

Program in brief

November, 2021

Den Bosch / Online

Acknowledgement of participation

€ 3,950

8 hrs/week (class)
+ 8 hrs/week
(assignments)

7 Weeks