Amsterdam Tech

Bachelor of Science in Data Science

AmsterdamTech

Prepare for the hottest job in the tech age by mastering the skills in data science

The B.Sc. Data Science at a Glance

Programme Title	Bachelor of Science in Data Science
Duration	3 years and 3 month
Start Dates	March, September
Education Model	Online
Credits	180 ECTS
Courseload	25-30 hrs a week

Programme Details

Why Data Science?

Increase your freedom of choice: Some data scientists work for the world's top tech companies, others work for themselves. As a data scientist, you can work anywhere in the world and under the terms you want.

Gain a high-value and versatile skill set: In the age of artificial intelligence, a data scientist is a critical chain to any business. Gain next generation skills that you can apply in any industry.

Increase your job prospects: Start a reputable career with endless job opportunities. The demand for data scientists is projected to continue to increase, which means you have a high chance to find a high-paying job when you graduate.

The Skillset You Will Acquire

What skills do employers want		What skills do we deliver
Python, Pytorch, R, SQL and noSQL databases, Splunk, Tableau or data visualization tools, Jupyter, Panda	TECHNICAL SKILLS	Python, Pytorch, R, SQL and noSQL databases, Splunk, Tableau or data visualization tools, Jupyter, Panda
Experience building and developing data models, familiarity with the software development cycle, ability to handle complex data sets including collection, storage, extraction, and visualization	SOFTWARE EXPERIENCE/ DATA EXPERIENCE	Build multiple data models with large and complex (and unstructured) data sets, collecting, storing, and displaying data with the goal of impacting business decisions, reflective of real data science projects
Problem solving, creativity, strong written and verbal communication, get-it-done attitude	LEADERSHIP SKILLS	Structured problem solving, creativity, strong written and verbal communication and collaboration skills, get-it-done attitude

Curriculum

Yearly Overview:

The programme consists of three main parts:

Data Science	Year 1 (11 months), Year 2 (11 months), Year 3 (10 months)
Final Project Preparation	Year 3 (2 months)
Final Project	Year 3 (5 months)

Data Science Program Year 1 Overview

Basic data science principles, variables, functions, loop statements, if statements, basic algorithms and data structures. Python, IDE, Terminal.

Cover fundamental computer programming concepts and learn the basics of C. Build a solid foundation in back-end programming including pointers, arrays, strings, algorithms, hash data structures, software architecture, blockchain basics and more Learners advance to more in-depth C programming such as Shell, then move on to cover intermediate data structures and algorithms. Learners move on to Python and the fundamentals of machine learning, covering regressions, training sets, structured vs unstructured data, and data collection, display, and storage. Learners also cover some of the cloud-based tools available for ML.

Key Topics: C, IDE Assembly, Python, Pytorch, Jupyter.

Data Science Program Year 2 Overview

After getting a handle on Python, learners advance deeper into machine learning, large/complex data sets, business principles and the use of data to improve key business outcomes, and how data can be a strategic asset to a business. Learners complete multiple real-world, larger projects.

Learners complete a final program project that aligns with the industry in which they want to get a job. The project must be about 5 months in duration and of significant technical difficulty. Learners will also simultaneously complete 40 technical interviews.

Key Topics: Python, Panda, Tensor Flow, Keras, Jupyter.

Year 1 and Year 2 are together with the AI/ML students, and in Year 3, you will diverge to your Final Projects.

Detailed Overview:

Year 1, 2 & 3: Data Science	
Module 1: Intro to Programming for Data Science	Module 2: Get the Fundamentals
Basic software engineering principles, variables, functions, loop statements, if statements, basic algorithms and data structures.	Cover fundamental computer programming concepts and learn the basics of C. Build a solid foundation in back-end programming including pointers, arrays, strings, algorithms, hash data structures, software architecture, blockchain basics and more.
Python, IDE, Terminal	C, IDE, Assembly
Module 3: Get into Data Science	Module 4: Advanced Data Science
Learners move on to Python and the fundamentals of machine learning, covering regressions, training sets, structured vs unstructured data, and data collection, display, and storage. Learners also cover some of the cloud-based tools available for ML.	After getting a handle on Python, learners advance deeper into machine learning, large/complex data sets, business principles and the use of data to improve key business outcomes, and how data can be a strategic asset to a business. Learners complete multiple real-world, larger projects.
Python, Pytorch, Jupyter	*Python, Panda, Tensor Flow, Keras, Jupyter*
Year 3: Final Project Preparation + Final Project	

The Learner Experience

Are you tired of endless lectures, exams, and textbooks? At AmsterdamTech, you join a new approach to learning and education that values and empowers the learner.

The programme is very flexible and designed to fit the needs of a 21st century student. We offer an interactive part-time learning experience, which means that you are able to study the content at your pace, while still being part of an engaging learner community.

Learn anywhere, anytime: With our online programme, you can study anywhere in the world. Since our degrees are part-time, you have time to start or continue your professional career while you master data science.

Community of experts: Online studies are not necessarily lonely. You will have weekly workshops with your course facilitator and live sessions with your mentor and peers. Each cohort is supported by course facilitators, mentors, and community managers to enhance and accelerate their learning experience.

Build a portfolio: Increase your practice by working on real projects. Showcase your learning in a strong portfolio that shows you are ready to join the job market. You will work on weekly assignments and projects, both individually and with peers, so that you gain practical evidence and can showcase evidence of your gained knowledge and skills.

Become a trusted leader: Our courses teach you more than tech. Excel in leadership skills like communication, teamwork, and consultancy. This programme also shows you how to position and pitch yourself as a freelancer and helps you build a track record through freelance projects.

The Learner Experience in a Nutshell

Workshops

Weekly workshops led by a course facilitator who is a field expert help you define and understand the why, what, how, and what if of the modules. The workshops are a great opportunity to learn by practice and interact with your peers.

Digital Learning Resources

In parallel with weekly workshop topics, you have access to digital resources curated specifically for your programme modules. All content is available within the related week under the modules on Campus.

Experiential Learning Platform: In partnership with Qwasar, all learners will have access to a powerful learning platform with an integrated development environment. The experiential learning model is what enables you to develop the very skills that will set you apart from other job candidates.

Mentoring

Your mentor is a field expert with extensive experience and knowledge. You interact with your mentor on a regular basis to receive support throughout the programme. Mentors help you gain mastery in your field of study as well as receive tips and guidance towards employability.

Assignments & Projects

You work on and solve real-world problems in each assignment and project. You get the chance to put your learning into action and build a portfolio along the way. Every week you are given an assignment while at the end of each module you are given a module project which is more comprehensive and challenging.

Peer-to-Peer Learning

We believe that peer-learning is an important element for success, and we see this as one of the core features of each programme. Some of the assignments and projects are designed in such a way that you work together as peers and develop your teamwork skills as well as learn from one another.

Town Halls

A Town Hall is an online event led by one of our community managers in which we regularly share ideas and feedback - but also create a space to celebrate achievements and share exciting news with one another. Town Halls are generally held bimonthly.

Admissions

Who Can Study at AmsterdamTech?

You are a high-school graduate ready to start a hot job in tech.

You are a working professional ready to make your next career move.

You have an associate's degree or had to interrupt your undergraduate education and are now dedicated to getting your bachelor's degree.

You got a taste of coding during a bootcamp and want to make this your career.

You breathe tech.

You are both a learner and a teacher.

You want to be part of transforming education.

Admissions

The Bachelor in Data Science is a rigorous, entry-level bachelor's programme. Whether you have 10 years of work experience, or are just getting started, this programme will help you gain all the skills you need to start working as a data scientist.

You should join this programme if you want to start a new career in data science, upgrade your skills and boost your employability for data science jobs, or you consider working as a freelance data scientist.

We evaluate and review each application holistically, and consider your educational background, any prior work experience, and motivation in your admission decision. You must at minimum hold a high school diploma to join the programme, and you must have the following language proficiency in English.

TOEFL Computer-based Internet-based: 234 or 90-91

IELTS 6.5 (minimum 6.0 in each band)

We also accept the Duolingo proficiency test.

Admission Process

1. Application: Fill in the online application form, including an up-to-date resume and a motivation statement. If you're found eligible - you will be invited to the next step.
2. Selection: Shortlisted applicants will be invited for a video interview and asked to record several short videos as part of the assessment process.
3. Enrolment: Upon acceptance, you are asked to confirm your seat in the cohort by paying the registration fee and signing our Community Guidelines. We also ask you to submit a copy of your academic diplomas and transcripts, passport, and English proficiency test scores.

Tuition and Programme Fees

The annual cost of the programme is 2900 Euros. You will have three payment options:

1. Annual payment: 2900 Euros
2. Biannual installments: 1500 Euros, twice a year
3. Quarterly installments: 800 Euros, four times a year

Learner Testimonials

This is what other AmsterdamTech learners are saying:

“AmsterdamTech is bridging the gaps between MOOCs and traditional education. We have weekly workshops where we are guided thoroughly by facilitators, we are guided by mentors, and we have weekly assignments and projects so that helps me to build on my skill consistently. “

“AmsterdamTech teaches you about self-leadership, how to be a good coach and consultant, and how can you make a difference in an organization by knowing yourself better.”

“I chose AmsterdamTech because of flexibility. At AmsterdamTech I can continue my job while upskilling myself. We have mentors and facilitators that really help you to be more accountable for your own learning. That helped me to speed up my learning.”

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