Master in

Business Analytics & Big Data

You drive innovation.

10 MONTHS • FULL-TIME • MADRID • OCTOBER

Data Scientists hold the sexiest job of the 21st century¹. These highly sought-after professionals combine business knowledge, Big Data technologies, and advanced analytical skills to drive decision-making and performance improvements across any organization. Data Scientists discover actionable insights that drive innovation.

¹ Harvard Business Review

THE MARKET

React faster to competitive actions by gathering and analyzing diverse data from the market and public sources.

THE NEW ENTERPRISE

COMPETING IN ANALYTICS

Lead innovation in information systems and other emerging technologies.

MARKETING

Maximize customer value and deliver superior customer experience using marketing analytics.

FINANCE & CONTROL

Optimize, measure, and forecast business performance with advanced analytical models.

OPERATIONS & MANUFACTURING

Align demand and operations to optimize performance and detect potential failures by tracking operational data in real time.

HUMAN RESOURCES & TALENT MANAGEMENT

Use talent analytics to predict employee performance, improve hiring, and better design roles and responsibilities.

INFORMATION TECHNOLOGY

You

DATA SCIENTIST

BUSINESS ANALYST

BIG DATA MANAGER

DATA SOLUTIONS ARCHITECT

BANKING

CONSUMER GOODS

FINANCE

TECHNOLOGY

AUTOMOTIVE

UTILITIES

ELECTRONICS

HEALTHCARE

INDUSTRIES

A few of the many roles in big data:

- Marketing Analyst
- Business Consultant
- Business Intelligence Consultant
- Data Scientist
- Business Analyst
- Researcher
- Analytics Consultant
- Data Solutions Architect
- Big Data Analytics Manager
- Chief Data Officer
- Big Data Entrepreneur

JOBS

4.4 million jobs by 2015 - Gartner

“McKinsey predicts that companies will struggle to find Big Data talent due to a shortage in well-trained people.”

Explore your Big Data career options:

email: bigdata.advisor@ie.edu
web: bigdata.ie.edu

In collaboration with IE Business School
Accelerate your career and master the four key areas necessary for success in business analytics and big data. Become an international professional who can drive innovation in any organization.

MASTER FOUR AREAS FOR SUCCESS

**Business Transformation**
- Introduction to Big Data and Analytics
- Transforming Financial Services Using Analytics
- Transforming Retail & Consumer Goods Using Analytics
- Big Data & Genomics: Transforming the Future of Medicine
- Smart Cities and Governments
- Financial Analytics
- Marketing Intelligence

**Big Data Technology**
- Business Intelligence & Data Warehousing
- Database Modelling for Analytics*
- Programming SQL for Analytics
- Mastering the Hadoop Ecosystem*
- Applied Tools for Analyzing Big Data*
- Innovative Technologies for Data Storage
- Stream Processing & Real-Time Analytics

**Data Science**
- The Knowledge Discovery Process
- Mathematics and Statistics for Data Analysis
- Basic Algorithms for Data Mining
- Statistical Models for Data Mining
- Building the Data Science Toolkit
- Forecasting Time Series
- Machine Learning Algorithms for Business
- Recommendation Engines
- Analyzing Social Networks
- Natural Language Processing & Text Mining
- Data Visualization
- Statistical Programming in R
- Statistical Programming in Python

**Professional Skills**
- Working Effectively in Teams
- Influence & Persuasion
- Giving Winning Presentations
- Running Innovation & Creation Processes
- Interviewing Skills and Careers

WHY IE

- Study at the **No.1 School in Europe** (Financial Times ranking, 2012 and 2013). Located in **Madrid**, a vibrant and global city.
- Work with classmates from dozens of nationalities
- **46,000 alumni** hold positions of responsibility in over 100 countries.
- **27 international offices** around the globe.
- Around **40%** of students every year receive some type of scholarship.

HANDS-ON CHALLENGES

You will engage in three intensive team challenges that will give you practical, hands-on experience working directly with industry experts. In each challenge, your team will present its results to a panel of experts.

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<th>CHALLENGE</th>
<th>THE MISSION</th>
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<tr>
<td>IBM Watson Challenge</td>
<td>Your team will be presented with a real world business situation by IBM. You will work fast to develop a data-driven tool or technology to improve their business performance.</td>
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<tr>
<td>Datathon</td>
<td>Four clients will provide your team with real data sets. You will apply your analytics and Big Data skills to uncover actionable insights and drive innovation.</td>
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<tr>
<td>Big Data Startup</td>
<td>You will develop and propose a Big Data application or idea and transform it into a plan for a start-up business or an innovation initiative.</td>
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3 STUDENT PROFILES

**BUSINESS**

You studied and/or are working in business. You want to become an expert in measuring results and using data analytics to drive business and innovation.

**TECHNOLOGY**

You want a front-office job where you can use technology and data to be an integral part of core business decisions.

**QUANTITATIVE**

You studied and/or are doing quantitative work in engineering, statistics or social research. You want to learn how to measure performance in an organization and become an expert in using analytics to drive innovation.