

## **SD Specialisation: Business Analytics**

### **This specialisation enables you to**

- design database systems for analysis of big data
- perform data mining using classification and prediction algorithms as well as clustering and rule association approaches
- model and optimise business decisions using AI techniques, mathematical programming, constraint programming and meta heuristics.

### **Career prospects**

The industry has a strong focus on big data, analytics, and AI these days. The business analytics specialization enables you to apply for data science jobs in the finance industry and basically any other industry working with large datasets (e.g., the retail and maritime sector). You can also pursue a PhD in the field and make a start-up, go academic, or work for one of the large vendors of business intelligence software such as Microsoft, SAS, SAP, and IBM.

### **Prerequisites**

There are no formal requirements for the specialisation, but students are expected to know:

- Discrete mathematics
- Basic programming skills

These skills would be provided by following the ITU courses Discrete Mathematics and Introductory Programming.

This specialisation emphasises modelling real-world phenomena with mathematical tools. It is an advantage, but not a requirement, to have an undergraduate degree in a social sciences topic, in particular one emphasising mathematical modelling using linear algebra, mathematical (continuous) analysis, statistics etc.