

# Data Scientist

STUDIA PODYPLOMOWE



## Study program

**9**

**192**

**11**

**2**

Liczba miesięcy nauki Liczba godzin zajęć Liczba zjazdów Liczba semestrów

### **BASICS OF STATISTICS WITH THE APPLICATION OF R/PYTHON**

- Introduction to the problems of descriptive statistics (8 h)
- Introduction to mathematical statistics (testing procedure) (8h)

### **DATA ANALYSIS IN PYTHON**

- Syntax, Arrays, Functions, and Panda (19 h)

### **DATA ANALYSIS IN R**

- R and RStudio environment, atomic types, vectors, lists, functions, data cleaning (19 h)

### **ADVANCED VISUALIZATION METHODS (Plotly, Dash, R Shiny) R/Python**

- Building interactive reports/applications (18 h)

### **SQL BASICS**

- ERD diagrams, Normalization, SQL DDL, SQL DM (18 h)

### **MACHINE LEARNING IN PRACTICE (R/PYTHON)**

- Supervised machine learning algorithms (linear regression, random forests, xgboost, time series analysis) (18 h)

### **INTRODUCTION TO DEEP LEARNING ALGORITHMS (KERAS, TESNOR-FLOW)**

- Neural networks in the processing of numerical, categorical and image data (16 godz.)

### **DATA ANALYSIS BY MEANS OF SPARK (INTEGRATION WITH PYTHON AND R)**

- Data processing and modelling in integration with Python and R (12 h)

### **ADVANCED SQL**

- DDL/DML. Advanced quering (10 h)
- SQL integration with Python (10 h)



## **NON-RELATIVE DATABASES (NOSQL)-NP. MONGODB, ELASTIC, NOE4J. INTRODUCTION TO THE NOSQL DATABASE**

- Querying of sample NOSQL databases (12 h)

## **ANALYST'S INTERPERSONAL SKILLS**

- Image building psychology. The art of persuasion and public speaking (7 h)
- Methods of presentation and reporting (7h)

## **GIT - BASICS**

- GIT - BASICS (2h)

## **PROJECT**

- Project Seminar (8h)

## **ASSESSMENT FORM**

- Final test (1 h)
- Final exam (1 h)