# CERTIFICATE

## CONFIRMATION OF SUCCESSFUL COMPLETION OF TRAINING AND PASSING THE EXAM

Piotr Krzysztof Sziroky

graduated from the course

## Data Science Invest in Pomerania Academy

realized by Pomorska Fundacja Inicjatyw Gospodarczych in Gdynia from 20.05.2023 r. to 29.08.2023 in form of workshops.

### GENERAL SCOPE

1. Programming basics

2. Statistics and probability

3. Work with data

4. Machine Learning

5. TensorFlow Library

6. Deep Learning

7. Projects

Gdynia, 01.09.2023

**Register entry no: 119/08/2023**

Michał Mysiak
President of the
Management Board

## EXTENSIVE SCOPE

| No. | Topic | Scope | No. of hours |
|---|---|---|---|
| 1. | Programming basics | GIT system tools and version control system<br><br>Python in Data Science | 49 |
| 2. | Statistics and probability | Introduction to statistics and elements of linear algebra | 7 |
| 3. | Work with data | Processing of data sets<br>Data visualization | 35 |
| 4. | Machine Learning | Machine Learning in practice: regression problems in supervised learning<br>Machine Learning in practice: classification problems in supervised learning<br>Machine Learning in practice: unsupervised learning | 49 |
| 5. | TensorFlow Library | TensorFlow Library | 3,5 |
| 6. | Deep Learning | Introduction to artificial neural networks<br>Learning of deep neural networks<br>Image processing - Computer Vision<br>Natural language processing<br>Working with sequences - recurrent neural networks<br>Learning with reinforcement | 63 |
| 7. | Projects | Practical projects, final project | 35 |