

# CERTIFICATE

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

Krzysztof Zadka

graduated from the course

### Data Science Invest in Pomerania Academy

realized by Pomorska Fundacja Inicjatyw Gospodarczych in Gdynia from 18.03.2023 to  
06.07.2023 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, 07.07.2023

Register entry no: 02/07/2023



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 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 Data visualization	35
4.	Machine Learning	Machine Learning in practice: regression problems in supervised learning Machine Learning in practice: classification problems in supervised learning Machine Learning in practice: unsupervised learning	49
5.	TensorFlow Library	TensorFlow Library	3,5
6.	Deep Learning	Introduction to artificial neural networks Learning of deep neural networks Image processing - Computer Vision Natural language processing Working with sequences - recurrent neural networks Learning with reinforcement	63
7.	Projects	Practical projects, final project	35