

# ZERTIFIKAT

Hiermit bestätigen wir, dass

**Maria Ulfah**

das Intensivprogramm

**Aus-/Weiterbildung zum Data Scientist**

mit 540 Stunden Programmierpraxis

(entspricht 720 Unterrichtseinheiten)

erfolgreich absolviert hat.



Dalia Das, Founder & CEO



Dr. Tereza Iofciu, Head Coach

01.02.2021 — 27.04.2021  
Hamburg, den 27.04.2021

In Kooperation mit:

ABOUT YOU

COYO

Zertifiziert durch:



## Ausbildungsinhalte

Die Teilnehmer\*innen haben in 720 Unterrichtseinheiten folgende Inhalte gelernt, diskutiert und in unterschiedlichen Aufgaben und Projekten vertieft:

### Programming & Database

#### Python

- Pandas
- Numpy
- Functional Programming
- Scikit-Learn
- TensorFlow/Keras

#### Unix

- Filesystem manipulations

#### SQL

#### AWS

- IAM
- SageMaker
- EC2
- S3

#### Google Cloud

- Big Query
- Google Notebooks

### Exploratory Data Analysis (EDA) & Statistics

#### Data preprocessing

- Sklearn Pipelines
- Pandas DataFrame

#### Data Analysis

- Distributional analysis
- General statistics

#### Data Visualization

- Boxplots
- Scatter plots
- Geo visualizations

### Data Science Portfolio Projects

#### Project 1

- Exploratory Data Analysis

#### Project 2

- Predictive Modeling

#### Final Project

- Capstone (4 weeks)

### Machine Learning

#### Regression & Classification

#### Machine Learning Algorithms

- OLS-based models
- Logistic Regression
- Decision Trees
- Random Forests
- Naive Bayes
- KNN
- SVM
- K-means
- PCA
- Semi-supervised models
- Time Series models
- NLP

#### Evaluation & Performance metrics

- Decision Matrix
- Model interpretability

#### Model tuning

- Bias-Variance Tradeoff
- Regularization
- Cross-validation

#### Optimization

- Gradient Descent
- Cost functions

#### Deep Learning

- ANN
- CNN

#### Machine Learning Pipelines

- MLflow

### Collaborative Working & Social Learning

#### Pair Coding

- Driver & Navigator

#### Agile Workflow

- Daily Stand-Ups
- Git Project Board
- Kanban

#### Daily Class Review

- Team work & Self-organization skills

#### Group Work, Individual Exercises, Reversed Classroom

- Presentations from students

#### Git-Workflow

- clone
- fork
- code reviews
- merging

#### Student 1:1

- Spot checks with instructional team

### Communication w/ Stakeholders

#### Business presentation

- Non-technical stakeholders

#### Data Science Lifecycle presentation

- Technical stakeholders

#### Visualization

- Matplotlib
- Seaborn
- Dash/Plotly
- Altair
- Google Data Studio

#### Stakeholder Review

- Compact & time-critical project alignment

# ZERTIFIKAT

## Maria Ulfah

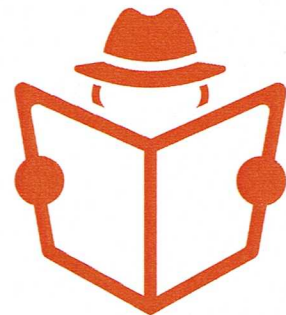
### PROJEKT:

### How users read news sites

Clustering the users of news sites based on user tracking and article data

News portals publish a large number of articles of different types and on different topics. By implementing tracking tools, publishers collect a lot of data about individual pageviews, which can be used to research the performance of articles and the preferences of different users.

Interesting insights were generated on the distribution of pageviews over time, the performance of different articles, and preferences of different readers. A dashboard was deployed to visualize the properties of the identified clusters.



### TECH-STACK:

Clouds (Google Data Studio) / BigQuery / SQL / AI Platform / Vaex / Pandas / Numpy / StandardScaler / PCA / Scikit-learn / K-Means / DBScan / Dash / Plotly / Heroku / Unix / KANBAN / Git

### ABSCHLUSSPROJEKT "DIGITALES GESELLENSTÜCK"

In Kooperation mit:

ABOUT YOU®

COYO

Zertifiziert durch:







Very friendly, communicative,  
patient, helpful and personable.



Very humble and yet knows her stuff.  
Likes to help others.

you are a great girl!  
I think you underestimate yourself -  
more courage!

"Excellent tech skills.  
Hands on mentality. Very reliable.  
Eager to deliver the best results.  
An awesome person to work with."

you make awesome dashboards!

Your dashboards are amazing,  
and you are great to work  
and to communicate with.

We unfortunately did not have  
the possibility to work together.  
I would really have enjoyed learning  
from your plotting & modeling abilities :)

You are like a quiet force!  
The things you do when you set  
your mind to them are amazing!  
Don't forget to brag more!

# MARIA

You are really good at  
learning things on  
your own and impressively  
talented in visualizations.

amazing set of skills and knowledge.  
really cool pair programming with you

It was always a pleasure working with you  
in the pairing sessions,  
I felt we were on the same level with our understanding  
and thus could help each other out quite a lot.  
Since the beginning you always had nice visualizations,  
so i'm looking forward so seeing cool stuff from you! (nico)

The strong and silent type :-)  
We didn't meet much but  
I always felt that you understood everything.

don't work too hard  
and forget about yourself

Unfortunately I never got to work with her.  
But that is not necessary to understand  
what a nice and smart person she is :)

## Feb - Apr 2021

- Carla
- Carlos
- Davain
- Eldin
- Hassan
- Jonathan
- Kathrin
- Maria
- Matthias
- Max
- Mena
- Nico
- Nicolai
- Paul
- Saša
- Sebastian
- Sina



Larissa  
Tereza





# SERTIFIKAT

DIBERIKAN KEPADA

**MARIA ULFAH**

Atas partisipasinya dalam BRI Data Hackathon 2021  
Jakarta, 17 Maret 2021

**DANAR WIDYANTORO**

Executive Vice President Enterprise Data Management Division





NANODEGREE PROGRAM



# Introduction to Machine Learning with TensorFlow

CERTIFICATE OF COMPLETION

Awarded to

Maria Ulfah

A stylized, handwritten signature in blue ink, reading 'Sebastian Thrun'.

SEBASTIAN THRUN

Founder, Udacity

September 25, 2022

Udacity has confirmed the participation of this individual in this program. Confirm program completion at [confirm.udacity.com/GAGHKUV6](https://confirm.udacity.com/GAGHKUV6)

# STATEMENT OF ACCOMPLISHMENT

#102,360

HAS BEEN AWARDED TO

**Maria Ulfah**

FOR SUCCESSFULLY COMPLETING

**Data Scientist with R Track**

COMPLETED ON

**SEP 20, 2019**



Jonathan Cornelissen, CEO





# STATEMENT OF ACCOMPLISHMENT

#13311754

HAS BEEN AWARDED TO

**Maria Ulfah**

FOR SUCCESSFULLY COMPLETING

**Analyzing Social Media Data in Python**

COMPLETED ON

May 14, 2020



**DataCamp**







#83,312

CERTIFICATE NUMBER

# STATEMENT OF ACCOMPLISHMENT

HAS BEEN AWARDED TO

**Maria Ulfah**

FOR SUCCESSFULLY COMPLETING

**Data Analyst with R Track**



**DataCamp**