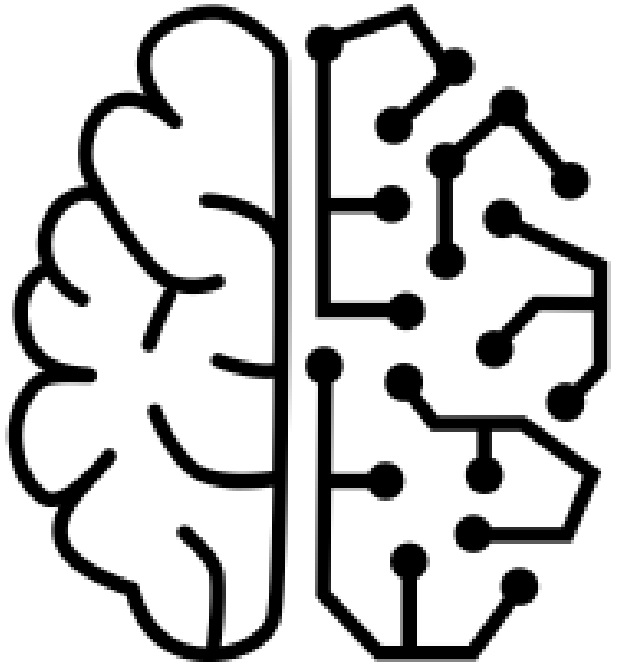
# INTRODUCTION TO MACHINE LEARNING

STEFFEN SCHNEIDER



# STEFFEN SCHNEIDER

Former IBAIT student (SAP & HWG Ludwigshafen)


10 years in Software development at SAP


Master Artificial Intelligence (Maastricht University)

Now working as ML-Engineer for Procure Ai, London

# ADMINISTRATION

- Course dates
- Assignments & Grading
- Overview of covered course content

# BLOCKS

Block 1 (October):

- Introduction to ML
- Linear Regression and Gradient descent
- Python fundamentals

Block 2 (November):

- Logistic Regression (Classification)
- Unsupervised learning (Classification)
- Artificial Neural Networks (ANN)
- Feature Selection and Feature Engineering

Block 3 (December):

- Convolutional Neural Networks (CNN)
- Hyperparameter Tuning
- Unsupervised learning (Clustering)
- Future of ML

# DATES

1. Saturday, 10.10.2020 10:00-13:15 (in person)
2. Wednesday, 14.10.2020 16:00-17:30 (online)
3. Wednesday, 21.10.2020 16:00-17:30 (online)
4. Wednesday, 28.10.2020 16:00-17:30 (online)
5. Wednesday, 04.11.2020 16:00-17:30 (online)
6. Friday, 13.11.2020 14:15-15:45 (online)
7. Wednesday, 18.11.2020 16:00-17:30 (online)
8. Wednesday, 25.11.2020 16:00-17:30 (online)
9. Wednesday, 09.12.2020 16:00-17:30 (online)
10. Friday, 11.12.2020 14:15-17:30 (online)

# ASSIGNMENTS & GRADING

- Assignment 1
  - Individual assignment (20%)
  - Dates: 10.10.2020, Deadline 28.10.2020
- Assignment 2
  - Group assignment (30%),
  - Dates: Start 28.10.2020, Deadline 18.11.2020
- Assignment 3
  - Group assignment (50%),
  - Dates: Start 18.11.2020, Deadline 16.12.2020

# ASSIGNMENTS & GRADING

- Handing in before midnight of the date which is given as a Deadline-Date.
  - Example: Deadline 31.10.2020 –> hand in **before** 00:01am 01.11.2020

- **Late submission** will cost you **10% of points per day**.

- **Individual assignments** are meant to be done **individually**. Discussions about the problem statement and solution approaches are encouraged. Please don't simply share your solution with others or copy your solution from others.

# SOME USEFUL REFERENCES

- Online course “Machine Learning” by Stanford Professor Andrew Ng:
  - https://www.coursera.org/learn/machine-learning

- Book “Machine Learning” by Tom M Mitchell (ISBN 978-1259096952)

- Book “Deep Learning” by Ian Goodfellow:
  - https://www.deeplearningbook.org/

# QUESTIONS?