

Slides will be found here from now on:

https://github.com/schutera/DeepLearningLecture_Schutera/tree/master/LectureNotes/DHBW22



GITHUB LINKLIST LINKS FOR YOUR SELF- STUDY

1. <https://github.com/schutera/Tutorial-1-Backpropagation-and-an-Introduction-to-Tensorflow>
2. <https://github.com/schutera/Tutorial-2-Transfer-Learning-with-Tensorflow-for-Object-Classification>
3. <https://github.com/schutera/Tutorial-3-Semantic-Segmentation-with-U-Net>
4. <https://github.com/schutera/Tutorial-4-Deep-Q-Reinforcement-Learning-with-the-OpenAI-gym>
5. <https://github.com/schutera/Tutorial-5-Generative-Adversarial-Neural-Networks-on-MNIST>
6. <https://github.com/schutera/Tutorial-6-Recurrent-Neural-Networks-for-Language-Modelling-and-Generation>

How you will be examined

Deadline 22.12.2022

Project

- **(50) Software Contribution** in the form of a GitHub Repository (or similar)
 - Set up a repository and make it easy to deploy your software (env, requirements.txt, host on binder, etc.)
 - Solve the technical problem
- **(40) Final report** on your Software Contribution (max 2 pages).
 - Motivate the underlying topic and data
 - Overview of your novel concept proposal to solve the software task (This might include methods, processes)
 - Discussion of your findings and an outlook on your concept and how in future one should proceed in your opinion

Tutorials

- **(10) Summary of tutorial 1, 2 and 3** (2-4 sentences)
 - Describe the key concepts, learnings and tasks in the notebook.
 - Handed in together with project report.

Data

<https://grouplens.org/datasets/movielens/100k/>

This data set consists of:

- * 100,000 ratings (1-5) from 943 users on 1682 movies.
- * Each user has rated at least 20 movies.
- * Simple demographic info for the users (age, gender, occupation, zip)



Focus

(Jan / Feb) Performance – Explainability – Data Analysis
(Mar / Apr) Performance – Data Analysis – Explainability
(May / Jun) Explainability – Performance – Data Analysis
(Jul / Aug) Explainability – Data Analysis – Performance
(Sep / Oct) Data Analysis – Performance – Explainability
(Nov / Dec) Data Analysis – Explainability – Performance

Recommender System for Movies TASK 1

Data

see tutorial 1 - regularization

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MNIST Task 2

Jump Start

You do not need to implement everything from scratch. For example have a look at:

https://keras.io/examples/structured_data/collaborative_filtering_movielens/

Don't forget to credit your source and make clear to us what your contribution is!