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| BIRD CLASSIFIER  DSIA.bbM.20.SS21 SOF 29781 - 1 | | |  | JULI | 12 | 2021 |
|  | | |  | Idea & Content  Image classification of birds using a convolutional neural network. The user can **up**load a bird picture via a website and get an assessment of which bird species it is**.**  Particularities  The neural network has been trained for a small subset of common bird species for the first release (LAB) but the ILV-portfolio covers a hypothetical scaling of the project.  **Challenges**  **LAB**: Refactoring of the model in OOP, creation of a web app, working with Docker, deployment.  **ILV**: Combining the various concepts and levels of the project and actually making them fit together for a hypothetical project, especially missing an actual client. |
| Lessons Learned By  Aichinger-Fankhauser Peter  Barkschat Jens  Bartz Robert  Holzinger Michael  Reckmeyer EmanuelElias  &  Viviane Aicher |  | Since the project was divided into a LAB and an ILV part, the requirements somewhat overlap. Of course, the Lab realization only includes the very basic minimal viable product, while the requirements defined here strongly extend on the MVP. The LAB might be understood as a very early first release used for illustration purposes when discussing further steps with the client.  Through this project we realized that active deployment know-how is required in various areas - just having a neural network for image classification is by no means sufficient. Since the entire group already had knowledge of Python and neural networks through the machine learning courses, but little or no knowledge of Visual Studio Code, Streamlit, Docker and the deployment of web applications, the learning curve was very steep. In addition, CI / CD was used in combination with GitLab. Tests were written, logging was set up and Sphinx documentation was written – all ffor the first time.  Due to the size of the group, a division into teams of 2/3 was agreed. Even though some mobility also took place, unfortunately this meant that not everyone was able to familiarize themselves with all areas in the same depth. However, an attempt was made to compensate for this through continuous discussions and coordination. | | |