



# What the funghi?

Group D  
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# Dataset

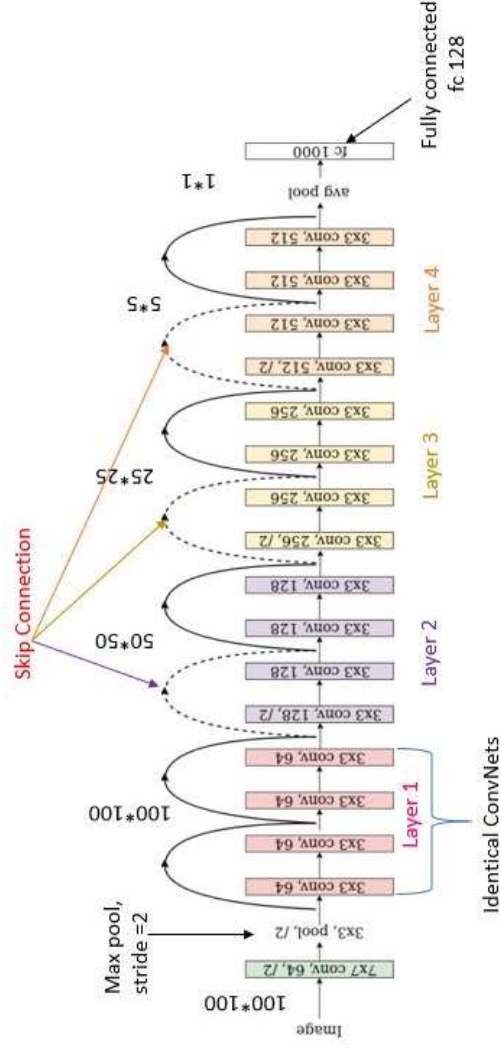
- 6 714 images
- 9 classes
- Common northern european genres
- Preprocessing
  - Crop
  - Resize
  - Normalize





# Model

- Pretrained Resnet18
- 3x3 Convolutional
- Fine-tuned on the mushroom dataset



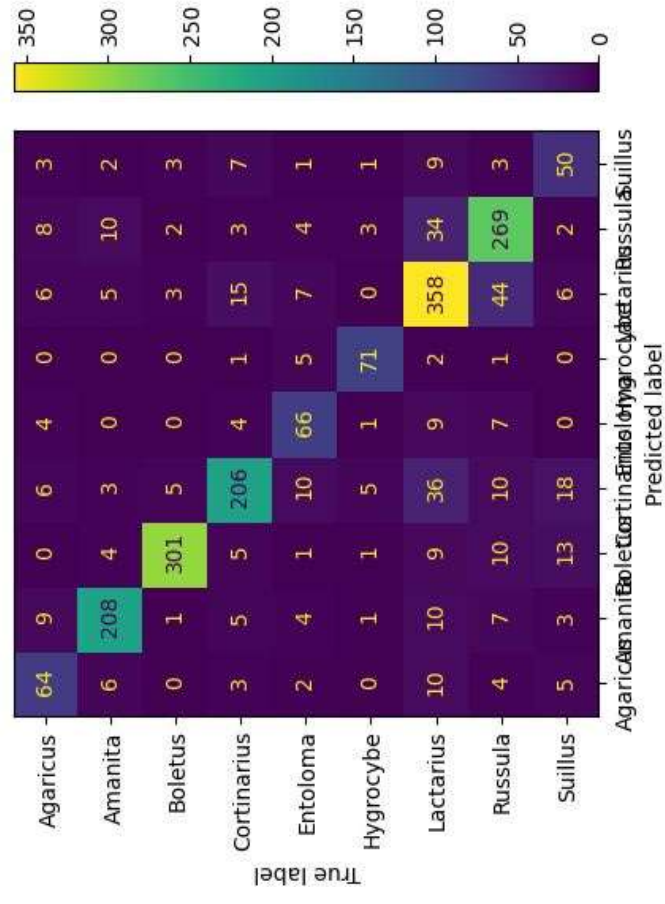
ResNet-18 Architecture

Fruit 360 Input Image size= 100\*100 px



## Model cont.

- Train test split 70/30
- Batch size 30 for 10 epochs
- Single fine-tuned ReLU head w/ 256 nodes
- Cross Entropy loss function
- ADAM w/  $\alpha = 0.001$
- Accuracy ~79%





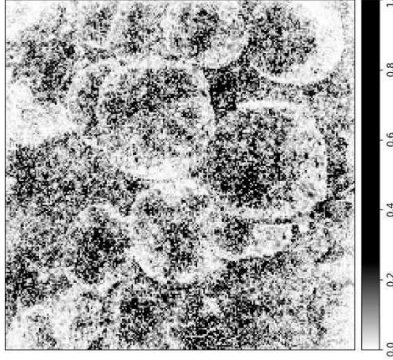
# Explainable AI

- Captum library
- Gradient-based
- Occlusion-based

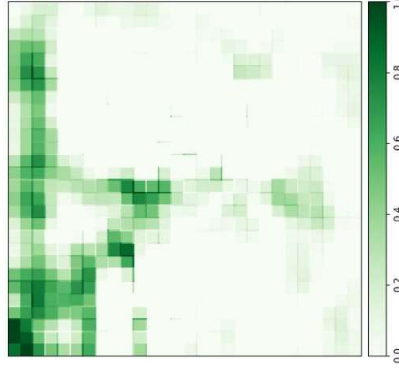
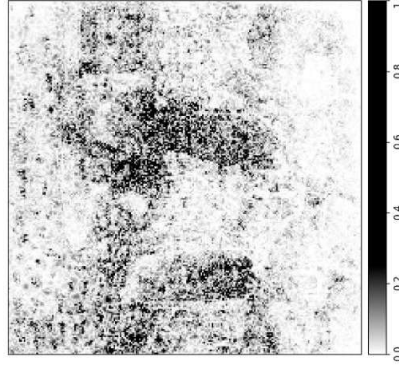
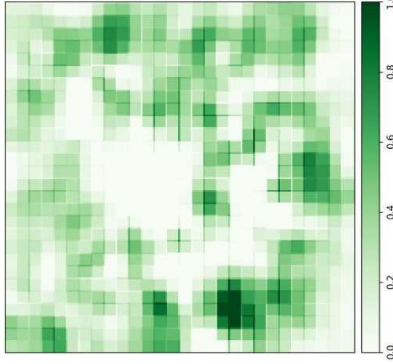
Model input image



Gradient-based attribution



Occlusion-based attribution





# Web-application

- Stateless Streamlit backbone
- Wikipedia web scraper
- Toggle ON/OFF the Explainable AI Analysis



# Task Distribution

- Web-UI: Rodiga, Durakovic
- Model: Rudolf, Rodiga
- Explainable AI: Rudolf, Rodiga





## Links

Dataset: <https://www.kaggle.com/datasets/maysee/mushrooms-classification-common-genuss-images>

Resnet18: <https://pytorch.org/vision/main/models/generated/torchvision.models.resnet18.html>

Explainable AI Lib: <https://captum.ai/>