DeFINe – Deep Facial Inpainting Network

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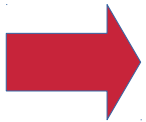
Motivation

- Durchführung eines Projektes mit nahezu unbegrenzten Daten
- Verbesserung existierender Inpainting Lösungen in Bezug auf Gesichtsrekonstruktion
- Einfaches Retuschieren von z.B Passfotos, Porträts



Flickr-Faces-HQ Dataset

SELECT

SAVE

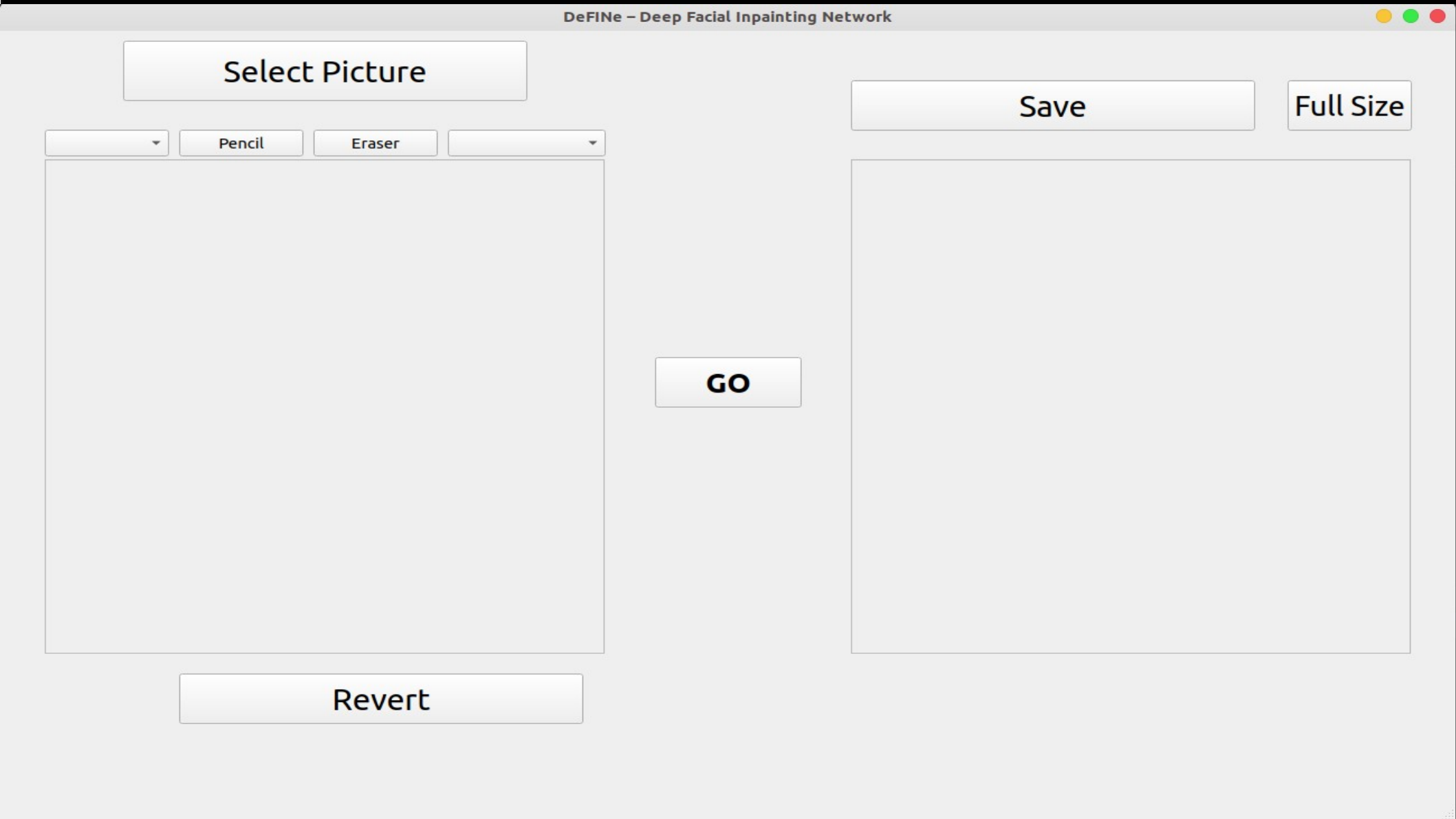
TOOLSIZE

LAST STEPS

GO

PATH | SIZE(MB)

PATH | SIZE(MB)


DeFINe – Deep Facial Inpainting Network
Select Picture
Save
Full Size
Pencil
Eraser
GO
Revert

Roadmap

- **Dataset:**
  - **Flickr-Faces-HQ Dataset (FFHQ)**
  - **Aligned Face Dataset For Face Recognition**
  - **CelebA**
  - **UTKFace**

Roadmap

- Dataset:
  - Flickr-Faces-HQ Dataset (FFHQ)
  - Aligned Face Dataset For Face Recognition
  - CelebA
  - UTKFace
- **Training**
  - **Pytorch**
  - **Dlib**
  - **Pipeline:**
    1. **Detektion**
    2. **Übermalen**
    3. **Trainingsschritt**

Roadmap

- Dataset:
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  - CelebA
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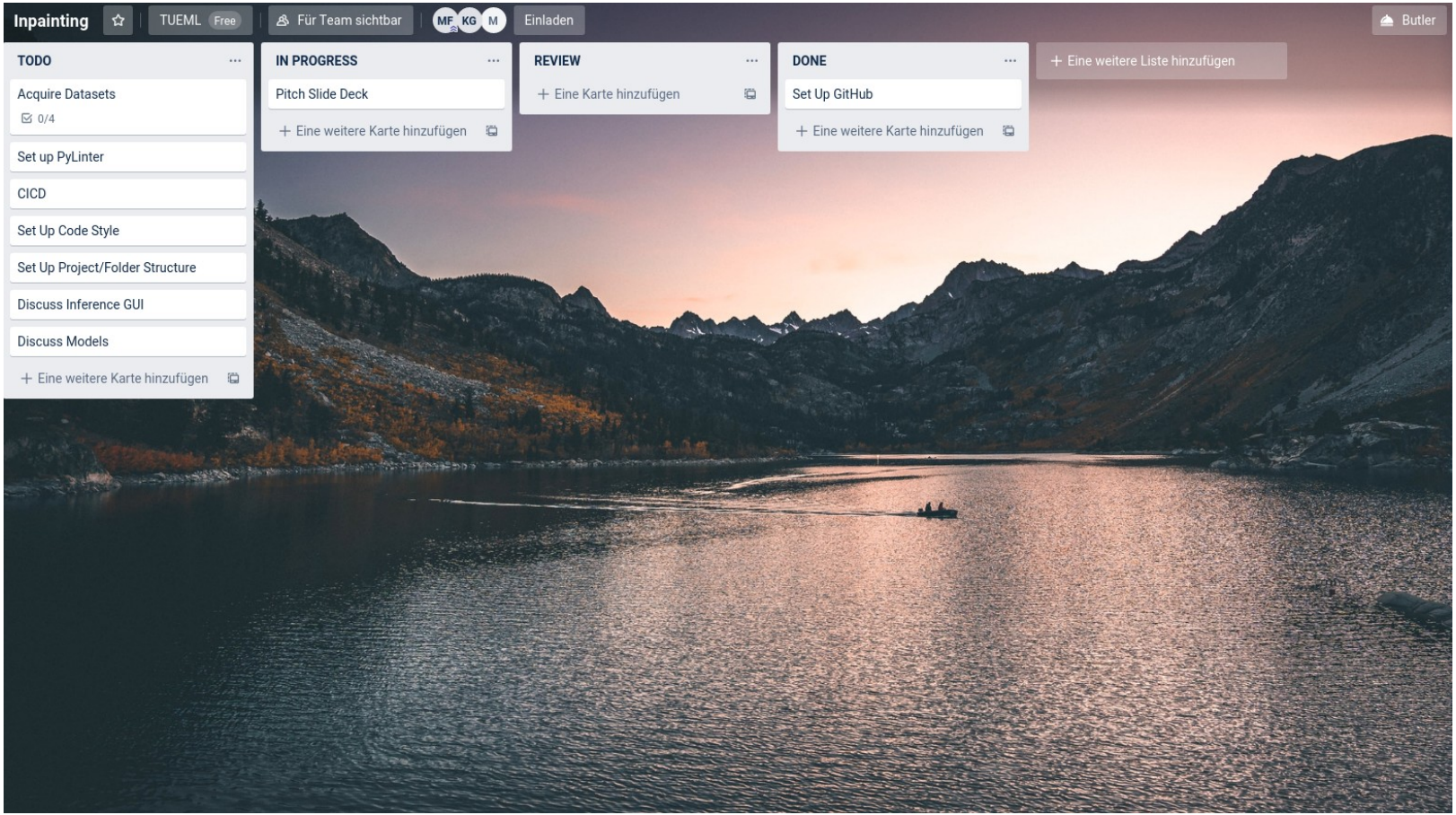
- Training
  - Pytorch
  - Dlib
  - Pipeline:
    I. Detektion
    II. Übermalen
    III. Trainingsschritt
- **Inferenz**
  - **Gui**
    - **Lade Foto**
    - **Freies Übermalen**
    - ➡ **Rekonstruktion**
  - **PyQt5**

Projektmanagement

- GitHub
- Trello
- CircleCi

- Software
  - Python3
  - PyQT5
  - Pytorch
  - Tensorboard
  - DLIB

Trello

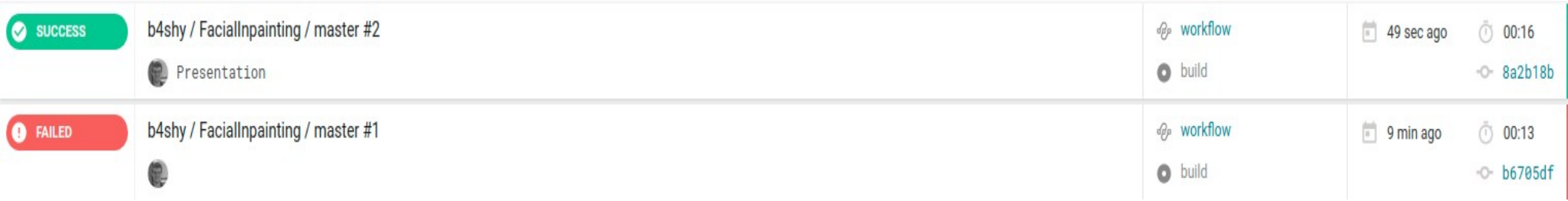

Inpainting
TUEML Free
Für Team sichtbar
MF KG M
Einladen
Butler
TODO
Acquire Datasets
0/4
Set up PyLinter
CICD
Set Up Code Style
Set Up Project/Folder Structure
Discuss Inference GUI
Discuss Models
Eine weitere Karte hinzufügen
IN PROGRESS
Pitch Slide Deck
Eine weitere Karte hinzufügen
REVIEW
Eine Karte hinzufügen
DONE
Set Up GitHub
Eine weitere Karte hinzufügen
Eine weitere Liste hinzufügen

CircleCI

- Commit-Pipeline
- Eingebunden in GitHub
  - Commit schlägt fehl, wenn:
    - PEP8 Syntaxfehler
    - Tests fehlschlagen
    - Code Coverage < Treshold
    - Pylint Score < Threshold

CircleCI

- Commit-Pipeline



  - Tests fehlschlagen
  - Zu geringe Code Coverage
  - Pylint Score < Threshold

Literaturverzeichnis

- https://github.com/NVlabs/ffhq-dataset
- https://www.kaggle.com/frules11/pins-face-recognition
- http://mmlab.ie.cuhk.edu.hk/projects/CelebA.html
- https://susanqq.github.io/UTKFace/