

## Interdisciplinary Project – Digital Agriculture

### EcoMapper – A Generative Model for Remote Sensing Images

#### IDP Project for 2-3 students from the subject:

- Machine learning
- Computer vision

#### Description

- In numerous fields, artificial intelligence is increasingly evolving into an autonomous decision-making and support tool for a variety of tasks. Predictive models are steadily becoming more accurate and are being applied more frequently. In agricultural monitoring and modeling, climate data alongside satellite imagery are among the most crucial sources of information. While there already exist a range of predictive models for climate and weather data to be used as inputs for future models, there are currently no equivalent models for satellite imagery. This project aims to develop such a model to enable realistic forecasts for satellite images as well.



#### Work packages:

- Literature review and research trends
- Developing an own generative Model for remote sensing images (main work)
- Hosting the Model on a server and make it accessible for the world

#### Requirements:

- Good knowledge of Python and Pytorch
- Experience with generative machine learning
- (Good) knowledge of machine learning
- Knowledge of server infrastructure and hosting
- Motivation for agricultural topics

#### Contact:

Start summer 2024  
By agreement

Please send a short mail with your motivation, CV and background to [malte.von.bloh@tum.de](mailto:malte.von.bloh@tum.de)

Supervisor:

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