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Deep Learning for Agriculture and Forestry

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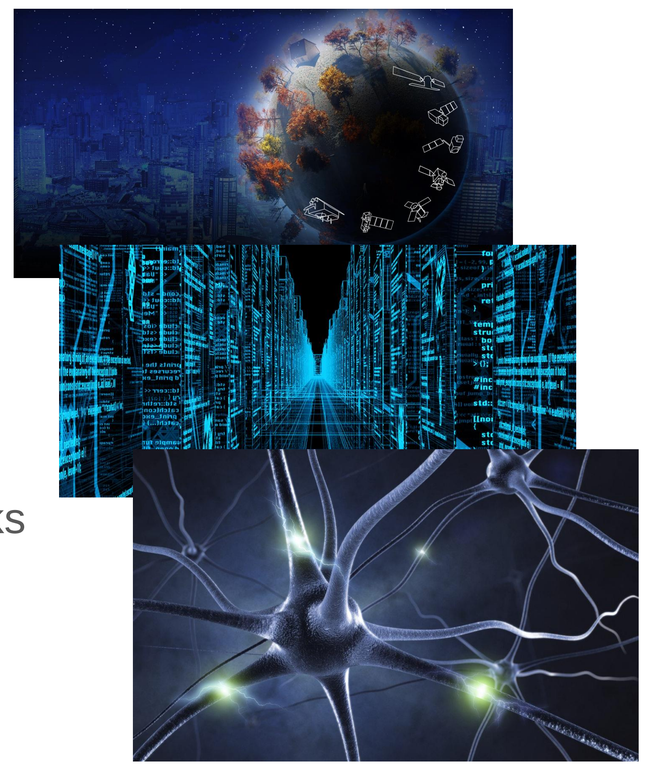
Introduction

Within the DataBio project CSEM utilizes its extensive experience in Deep Learning methods for providing image analysis services in agriculture and forestry. The main goal of the DataBio project is to show the benefits of Big Data technologies in the raw material production from agriculture, forestry and fishery/aquaculture for the bioeconomy industry to produce food, energy and biomaterials responsibly and sustainably.

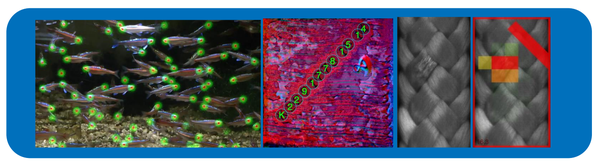
Big Trends

- Earth Observation
- Big data
- Deep neural networks

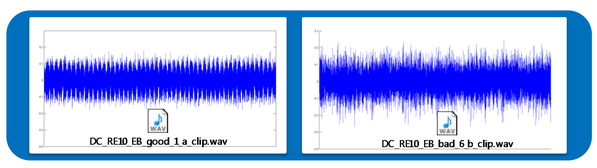


CSEM responses

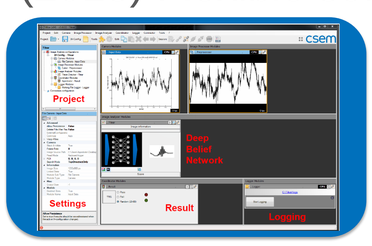
- (2008) TilEye: Visual Quality Control with Deep Neural Networks



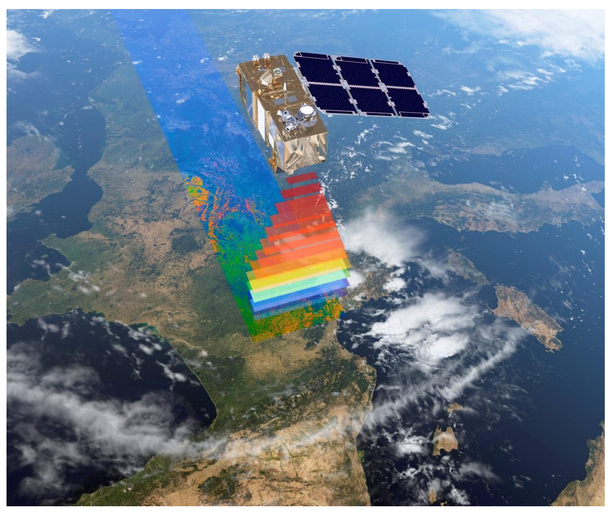
- (2011) TilEar: Acoustic Quality control

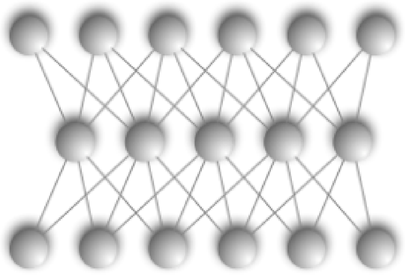


- (2013) Flexible software platform



Earth Observation framework





Strength of CSEM

- ✓ **Extensive experience in Machine Learning**
- ✓ **Industry proven**
- ✓ **High performance computing**

What it does

- ✓ **Hyperspectral satellite image analysis**
- ✓ **Crop/Species modelling**
- ✓ **Data lifecycle management**

Benefits for the user

- ✓ **Detection of anomalies**
- ✓ **Parcel Identification**
- ✓ **Scripting interface**
- ✓ **Reporting**

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