Internship: Generating NDVI profiles from accumulated thermal time

Company description

eLEAF is a Wageningen based remote sensing company that supplies near real-time data to the agriculture and water sector on crop evaporation and biomass production. Our aim is to support sustainable water use, increase food security, and protect environmental systems by delivering accurate and reliable data on crop and water conditions. We are active worldwide, having completed projects in over 30 countries, and work closely with partners that are at the forefront of new developments in agronomics and remote sensing.

At the heart of the company is eLEAF's PiMapping® technology. This technology is a set of algorithms used to enrich raw satellite imagery. Through energy balance modelling land surface atmosphere interactions are described, resulting in pixel discrete information on a wide variety of parameters, including biomass production, crop water use, water shortage and weather conditions. These parameters form the basis of our operational applications. With this technology eLEAF has been awarded "Geospatial Solutions Company of the Year 2013".

Job description

eLEAF's PiMapping® technology uses raw satellite information to derive quantitative information at pixel level. The Normalized Difference Vegetation Index (NDVI), which can be derived from satellite images, plays an important role in describing canopy change through the growing season. Due to cloud conditions this parameter cannot be derived continuously from satellite data. The aim of this study is to estimate NDVI as function of accumulated (thermal) time. The study comprises the following activities:

- Extract NDVI profiles during the growing season of 2014 to 2016
- Build a model for NDVI estimation based on NDVI profiles and thermal time change
- Assess the robustness of the model by evaluating modelled NDVI over the growing season

The final content and timelines will be agreed upon by the candidate, university and eLEAF before the internship starts.

What we ask

- Background in big data analytics, time series analysis
- Proficient python program skills
- Strong analytic skills
- Independent worker

What we offer

- Working with state of the art technology in remote sensing
- Internship position in a dynamic internationally oriented company
- Workplace in Wageningen
- Internship compensation

Application

You can find information about eLEAF at www.eleaf.com. For more information you can contact Ernesto Bastidas-Obando (ernesto.bastidas@eleaf.com).