



INTERNSHIP REPORT



German Aerospace Center (DLR),
Oberpfaffenhofen, Germany

Submitted by:
Rabin Ojha,
Copernicus Master in Digital Earth (2021 - '23)

December, 2022

About the company and department

The German Aerospace Center (*German: Deutsches Zentrum für Luft- und Raumfahrt e.V.*) is the national research center of the Federal Republic of Germany specializing in the sector of aerospace, energy and transportation. The headquarter lies in Cologne but the company is spread over 35 locations within the country.

The German Remote Sensing Data Center (DFD) falls under the Earth Observation Center (EOC) at the DLR and consists of several departments. I was part of the Agricultural and Forest Ecosystems team and AGRAIN project under the Department of Land Surface Dynamics.

Activities

The internship lasted from 4th July, 2022 to 26th August, 2022 at the DLR site in Oberpfaffenhofen near Munich.

The following activities were carried out by me during the internship:

1. Analysis of European Centre for Medium-Range Weather Forecasts (ECMWF) data from the Climate Data Store (CDS) as input dataset for the Biosphere Energy Transfer Hydrology (BETHY) model to determine the Net Primary Production (NPP) in West Africa.
2. Implementation of download routines using Jupyter Notebooks.
3. Implementation of conversion routines of the downloaded time series to BETHY compatible input data format in Python using Xarray library and Jupyter Notebook.
4. Generation of executable Python programs for operational use.

5. Validation and documentation of the results.

The overall work was supervised by Dr. Andreas Hirner of the Department of Land Surface Dynamics.

Acknowledgement and recommendation

I would like to express my gratitude to Andreas, for supervising my work and encouraging me throughout the internship period. Thanks to Jonas Meier, Research Scientist at DLR, for all the support right from the application process to all other administrative works until the end. And to all the people at the department, who made me feel like one of their own.

Internship at DLR is something I'd definitely recommend to other fellow students. The team at the company is so diverse and you'll get to learn many new things. Obviously, I wish the internship period was longer than 2 months. For the future aspirants, stay alert on the opening of applications as they are always looking for helping hands. Enjoy the process!