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DLR – DAAD Fellowships

Fellowship No. 381

Research Area :	Space
Research Topic:	Deep Topology Learning for Large-Scale Earth Observation Problems
DLR Institute:	Remote Sensing Technology Institute (IMF), DLR Oberpfaffenhofen
Position:	Doctoral Fellow
Openings:	1
Job Specification:	<p>Earth observation (EO) has irreversibly arrived in the Big Data era with the Sentinel satellites (and in the future with Tandem-L). This requires not only new technological approaches to manage large amounts of data, but also new analysis methods. Here, methods of data science and artificial intelligence (AI), such as machine learning, become indispensable. Deep learning in particular has led to a revolution in AI in recent years, but its potential for EO is only recently being discovered. AutoML is among the most urgent research topics in AI, having already outperformed machine learning experts in finding better hyperparameters for certain ML algorithms. The aim of the proposed Ph.D. thesis is to develop new concepts, methods and algorithms of deep topology learning tailored to large-scale Earth observation problems. A close collaboration with two large scale projects, namely the So2Sat project (so2sat.eu) funded by the European Research Council the DeToL project (detol.de) funded by the German Federal Ministry of Education and Research (BMBF), is planned. The successful candidate will be able to work on the most advanced Earth observation data with AutoML at HPC scale.</p>

Required Qualification: Master related to computer science or similar; programming skills in Matlab and Python; experience in deep learning; open communication and team spirit. He/she should be able to work in a research team at the Remote Sensing Technology Institute of DLR in the frame of European and international projects and collaboration, carry out advanced theoretical research, demonstrate practical results, and contribute to the technical and technological aspects of the projects.

Advantageous Skills: High programming skills and knowledge in machine learning and computer vision

English competence: High; see requirements on www.daad.de/dlr

Earliest Start Date: 01.07.2019

Application Deadline: Until position filled

Further Information: <http://www.dlr.de>
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