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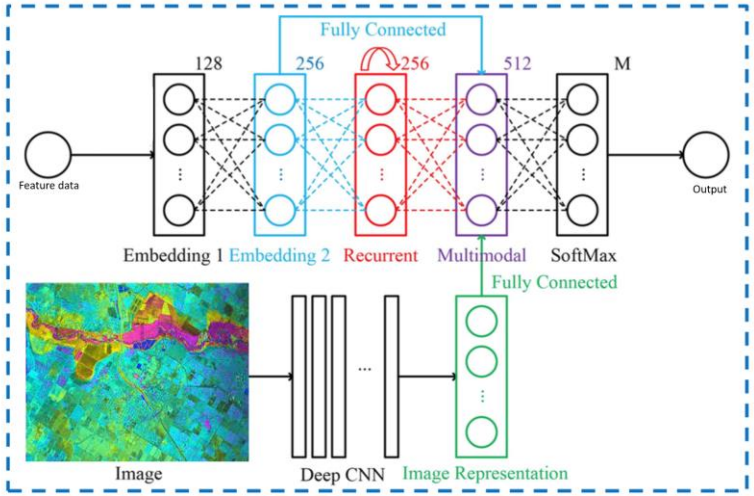
Multimodal Deep Learning For Digital Soil Mapping

Digital soil mapping (DSM) has become a popular and cost-effective method for producing soil maps. However, the existing DSM data representation rarely includes contextual information about the environment. DSM models are typically trained by features in form of point data with no information about their neighborhood.

We are searching for a master's student to design a novel multimodal deep learning architecture based on cutting-edge research that can handle both feature data and image data at the same time in this project. The feature data comprises just information from a given location, while image data collected via remote sensing can include information from the surrounding area. The primary purpose of this work is to use this unique network to create an accurate soil map on a regional scale here in Germany.

This research requires prior knowledge of computer vision and deep learning fundamentals, as well as statistics. Also, programming proficiency, preferably in Python or MATLAB, is essential. The final thesis should ideally be written in English.



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References:

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