



# AI-based Applications on Earth Observation Data for Agriculture

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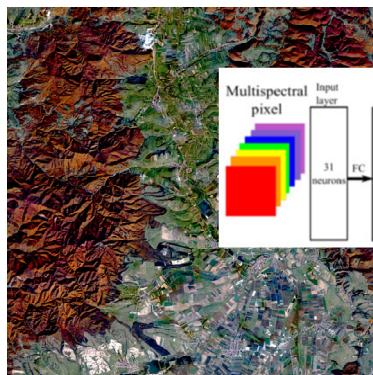


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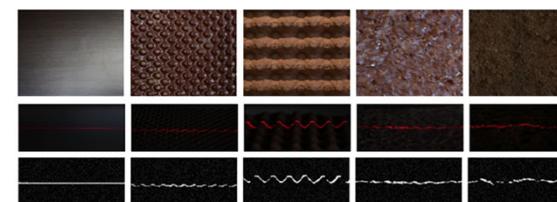


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## AI-based visualization of PRISMA hyperspectral images for applications in Agriculture



## AI-based soil roughness estimation

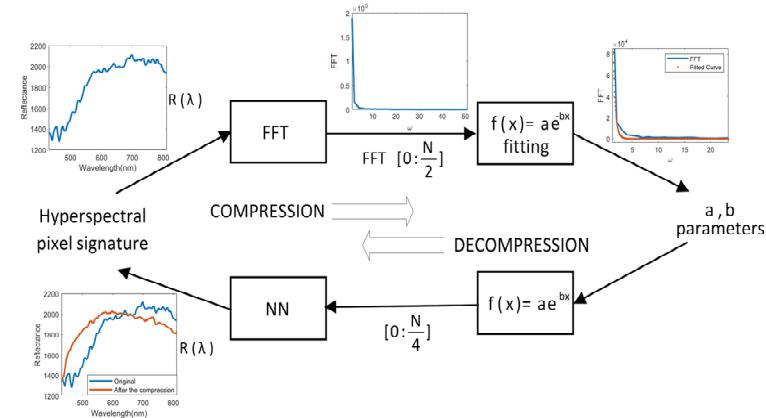


Golden model (in software):  
VGG-11 CNN model implemented using PyTorch,  
3 fully-connected layers at the output

I. Plajer, A. Băicoianu, L. Majercsik, *AI-Based Visualization of Remotely-Sensed Spectral Images*, International Symposium on Signals, Circuits and Systems (ISSCS), Iasi, Romania, 13-14 July 2023

S. Popa, K. Marandskiy, G. Feldioreanu, M. Ivanovici, *Convolutional neural network hardware implementation for soil roughness estimation*, European Association of Remote Sensing Laboratories (EARSeL) Symposium, Bucuresti, Romania, 3-6 July 2023

## AI-based hyperspectral image data compression



M. Ivanovici, K. Marandskiy, *Exponential Feature Extraction and Learning for Pixel-Wise Hyperspectral Image Compression*, International Geoscience and Remote Sensing Symposium (IGARSS), Pasadena, California, 15-21 July 2023



<https://ai4agri.unitbv.ro>