



CHALLENGE #16

UI-SAT-02

Flood Imagery Generation Using Satellite Products and Deep Neural Networks

Meet the expectations of this US Node through the technology challenge described below



GOALS

Convolutional neural network-based image-to-image deep learning models are employed in various fields, and they show great potential. This project aims to explore the feasibility of and develop an image-to-image, either supervised or unsupervised, neural network. The neural network is expected to translate satellite products like imagery or infrared bands of any urban or suburban area to an image where a flood event is depicted for the input area. The aim is to understand how floods would affect various locations.

DETAILS

The project will include reviewing the literature for similar image-to-image translation tasks; collecting relevant datasets; developing a neural network that carries out the aforementioned image-to-image translation task.

SKILLS REQUIRED

Convolutional Neural Networks; Generative Adversarial Networks; Deep Learning; Python; PyTorch or TensorFlow.