

Title: DELTA: An Open-Source Framework to Simplify Machine Learning with Satellite Imagery.

Summary/Abstract:

DELTA (Deep Earth Learning, Tools, and Analysis) is an open-source framework developed at NASA to simplify running and training machine learning (ML) models on satellite imagery. Users new to machine learning can run existing ML models on satellite imagery with minimal setup and configuration. For experienced ML users, DELTA helps simplify data engineering, preprocessing steps, and reduces the need for boilerplate code that needs written to make satellite imagery datasets palatable for machine learning. This lets data scientists focus on model development while DELTA handles the imagery manipulation. This presentation will demonstrate DELTA's functionality and share some examples from an active project using it for flood mapping using imagery from multiple satellite sources.