**A diagram of a process flow

Description automatically generated**

Fig. 2: Workflow diagram for pre-processing steps for imagery inputs (S1 and S2), generation of presence and background learning data, and model training and validation. Input features are combined into a single image stack with X bands. We extract the pixel values for the learning data to train and validate the RF models.

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This improved map of quaking aspen forest cover will facilitate analysis of the spatial distribution, habitat suitability, and ecology of this important species. Given the uncertainty around aspen growth dynamics in a changing climate (Kulakowski et al., 2013; Rogers et al., 2020), the curation of such maps over large regions and at relevant temporal periods is necessary for effective management.