# Sentinel Hub

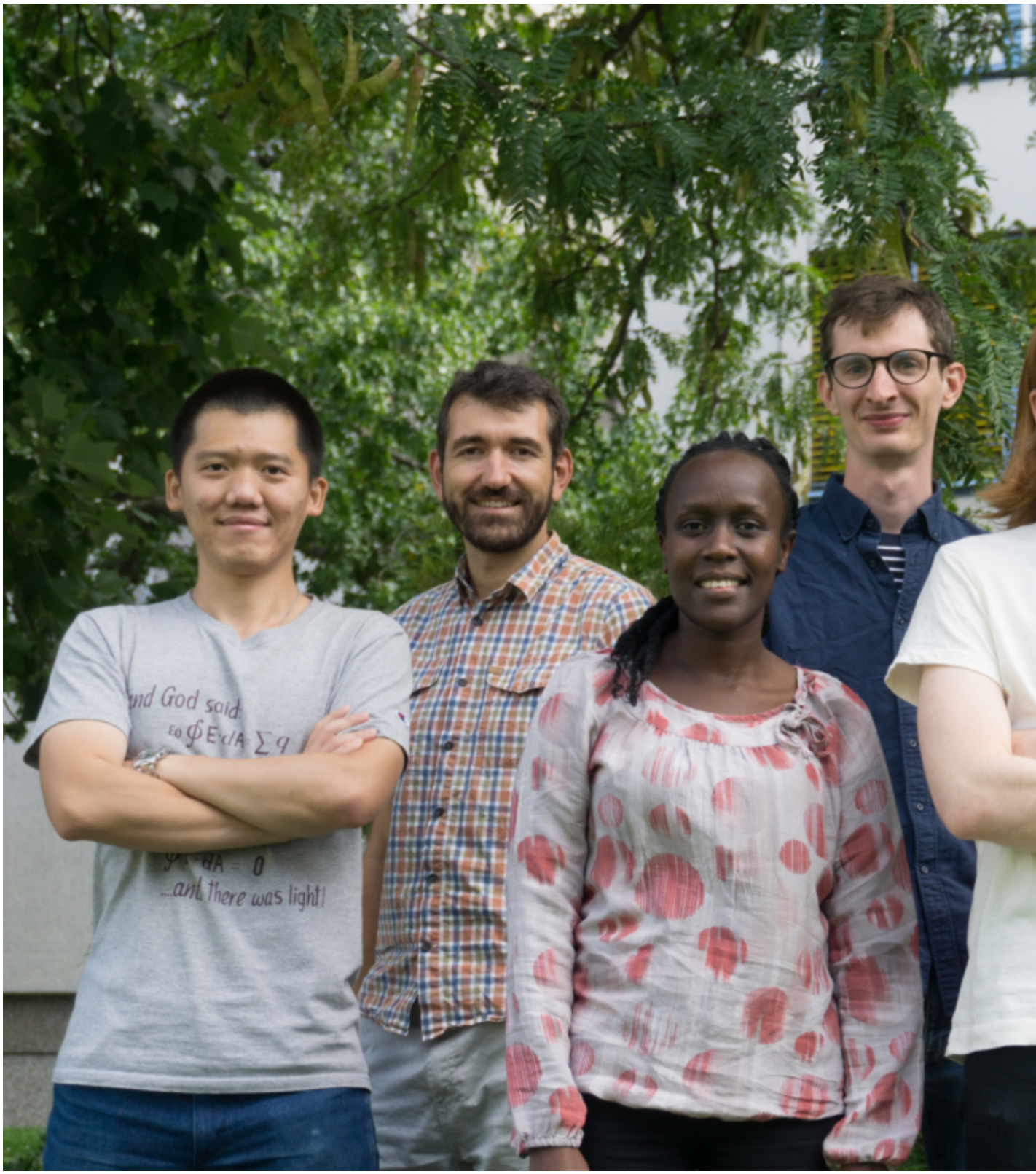
## Using SAR Sentinel-1 archive imagery and machine learning we will extract delineate the extent of floodplains.

By utilising the long term archive of Sentinel-1 SAR imagery, our proposed service will assist the mapping of floodplains improving accuracy and automating what is currently a manual process. Mapping floodplains is a very manual and time consuming
task, meaning that they are updated infrequently. By introducing time series satellite imagery you can optimise the process, increasing the update frequency of these maps.
Using machine learning, flooded pixels will be extracted from Sentinel-1 images. The analysis will be repeated over every acquisition in the provided time period and then concatenated into a layer where each pixel value will represent the percentage of
acquisitions for which that pixel was flooded. Using thresholding, this result will be used to delineate the floodplain extent as well as the areas most prone to flooding during the analysis time period.

**USP**
Earth Observation, Geospatial

**Target Market**
Environment, Government Agencies, Insurance

**Space Connection**
Earth Observation, Synthetic Aperture Radar

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