Geospatial Analyst Assignment

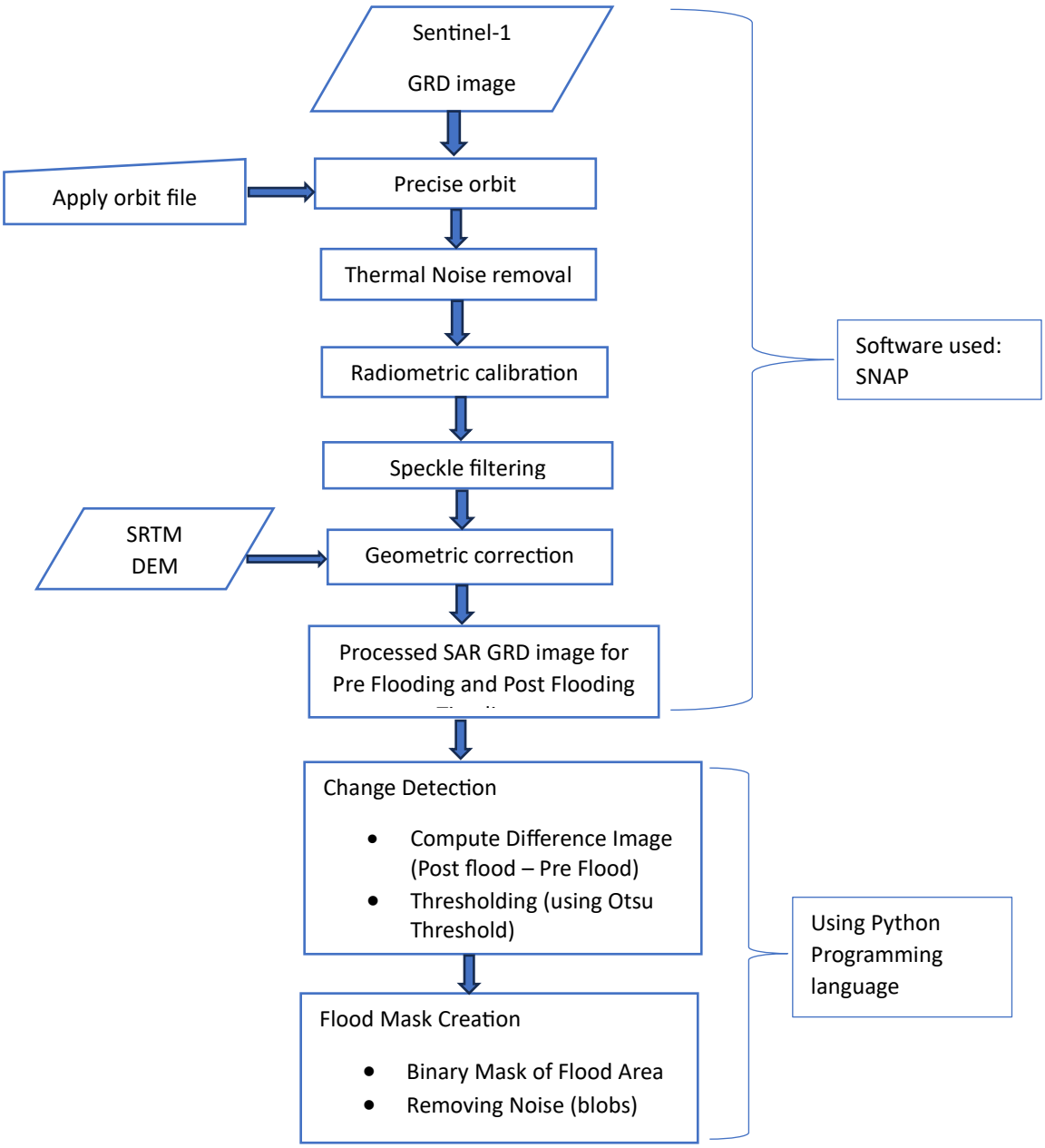
- Overview of the study area:

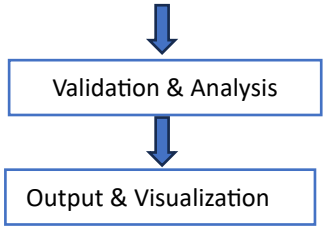
The area of study is the Goalpara District, situate on the banks of the river Brahmaputra River in Assam. During the year 2020 heavy monsoonal rains and elevated Brahmaputra tributaries began in May and continued through August, 2020.

The Goalpara district was severely impacted by the flooding impacting across 4.5 lakh people across the district. Apart from this, there was a loss of wildlife as well wherein famous Wildlife Sanctuaries and National Parks lost a significant amount of their habitat as well as life of the animals.

The 2020 floods in Goalpara were devastating not only in terms of human displacement and agricultural loss, but also because they unfolded amid a pandemic—posing extra hurdles for relief, healthcare, and disease management. The crisis underscored the need for resilient infrastructure, early warning systems, and better disaster preparedness in flood-prone regions.

- Methodology:





- Challenges: The major challenges included interoperability of datasets within various platforms and their alignment. For instance, during the analysis the extent of raster data sets had to be maintained constant for accurate analysis.
- On further analysis, it was observed that the actual flooded area and flood area detected were giving the same results. These results are a bit ambiguous and will need to be investigated further.

- Outputs: