



# Development of water quality monitoring tools using hyperspectral images



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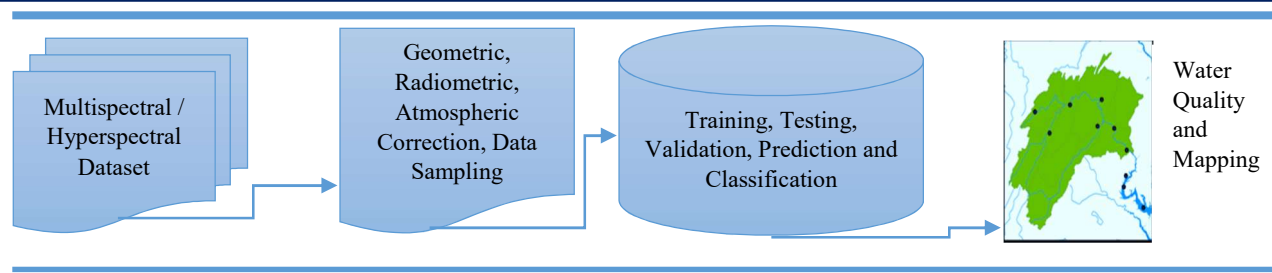
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Protection of water resources is pivotal in the overall environmental protection. Many researchers, activists, NGO's, governmental organizations devote their efforts to monitoring and improving water quality. To ease the task of water resource researchers and decision-makers to monitor water quality effectively, remotely sensed data can be beneficial. In the past few decades, remote sensing techniques have been widely used to measure qualitative water quality parameters. However, the use of moderate resolution sensors may not meet the requirements for monitoring small water bodies. The use of hyperspectral remote sensing provides an opportunity to monitor and predict water quality in water bodies across topography and geographical aspects because of their coverage and reliability. The data is continuous, high volume and collects radiant energy reflected from target features across the electromagnetic spectrum (400 – 2500 nm) at fine spectral resolution and sampling intervals. The evolution of hyperspectral sensors from EO-1 Hyperion, MODIS (Aqua & Terra), AVIRIS-NG has moved to advance hyperspectral sensor platforms such as DESIS, PRISMA, HySIS to name a few. The interaction for our study is to correlate the data to the hyperspectral images obtained to perform water quality monitoring. In our project we propose to use hyperspectral imaging for water quality monitoring, prediction and attribution.



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