**HANGZHOU BAY COASTAL WETLAND VEGETATION ANALYSIS BASED ON PHENOLOGICAL CHARACTERISTICS USING SENTINEL-2 DATA**

Bachelor's thesis

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**ABSTRACT**

**The relevance of the research** lies in the vast area of coastal wetlands in China, which have multiple ecological functions. Hangzhou Bay coastal wetland is a key area for ecological protection and research, but natural and human factors lead to the reduction of wetland area and the destruction of vegetation ecology, which requires effective detection and management.

The current research direction is the application of remote sensing image in the classification of wetland vegetation and the monitoring of vegetation phenological characteristics in long time series.

**The object of this study** is the vegetation of Hangzhou Bay coastal wetland, and the subject is the vegetation extraction in Hangzhou Bay coastal wetland based on sentinel-2 vegetation phenology.

**The purpose** the research is to extract information on vegetation phenology and classification of vegetation in Hangzhou Bay coastal wetland. To achieve the purpose of the study, the following **tasks** were set:

1.Establishment of remote sensing image feature index and vegetation Phenology fitting model.

2.Analysis of the difference and discrimination between the typical vegetation and Vegetation Phenology of Hangzhou Bay coastal wetlands.

3.Classification of vegetation extracted from Hangzhou Bay coastal wetlands.

**Structure of the work.** The qualification work consists of 3 sections, an introduction and conclusions, laid out on 36 pages. Contains 11 figures and 2 tables.