Functional and Non-functional requirements

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| Functional Requirements | Non-Functional Requirements |
| The system must allow user to upload satellite images. (.jpg) | The system should process images in reasonable time. |
| The system must pre-trained machine learning model for classifying the land use types. | The system should be able to handle larger satellite images. |
| The system should automatically resize and preprocess the images to match the model’s input dimensions. | The system should be able to process images with different resolutions without significate accuracy loss. |
| The system must process the uploaded image and classify each segment (e.g., a 64x64 pixel block) into one of the predefined land use categories | The system must ensure the generated land use maps are accurate and reliable based on the trained model’s predictions. |
| After classification the system must highlight image segments according to the predicted class and combine those segments and return them into the original form. | The system should be user-friendly and easy to navigate, especially for users who are not familiar with AI or satellite image processing. |
| The system must identify and display the differences between two satellite images which are of same area, scale and size. | The system should have an interface for uploading images and output a readable land use map. |