Deep Learning Project Proposal

Team Members

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Selected Paper

Title: Spatial-Spectral Transformer for Hyperspectral Image Classification

Authors: Xin He, Yushi Chen, Zhouhan Lin

Journal: Remote Sensing, 2021, 13(3), 498

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Number of Citations: 25 (as of February 9, 2025)

Project Timeline & Responsibilities

Task	Start Date	End Date	Responsible Person
Literature Review	Feb 10, 2025	Feb 20, 2025	Surya
Dataset Collection and Preprocessing	Feb 21, 2025	Mar 5, 2025	Rakesh
Implementation of Transformer Model	Mar 6, 2025	Mar 25, 2025	Krushal
Experimental Evaluation and Analysis	Mar 26, 2025	Apr 10, 2025	Surya
Model Enhancements and Optimization	Apr 11, 2025	Apr 20, 2025	Rakesh
Final Report Writing and Presentation Preparation	Apr 21, 2025	Apr 27, 2025	Krushal

Project Summary

This project focuses on implementing and evaluating the Spatial-Spectral Transformer (SST) for hyperspectral image classification. The study investigates the use of Transformers to model long-range dependencies in spectral data while integrating CNN-based spatial feature extraction. The team aims to replicate the results presented in the paper and explore potential enhancements for improved classification accuracy.

Regular team meetings will be held to track progress, and all members will contribute to key deliverables such as the final report and presentation.