SnT 2025 · CTBT: SCIENCE AND TECHNOLOGY CONFERENCE · 8 SEPTEMBER ONLINE DAY · 9 to 12 SEPTEMBER AT HOFBURG PALACE, VIENNA & ONLINE

LIGHTNING TALK

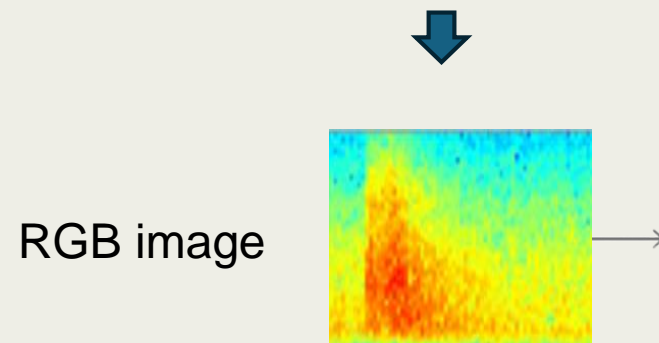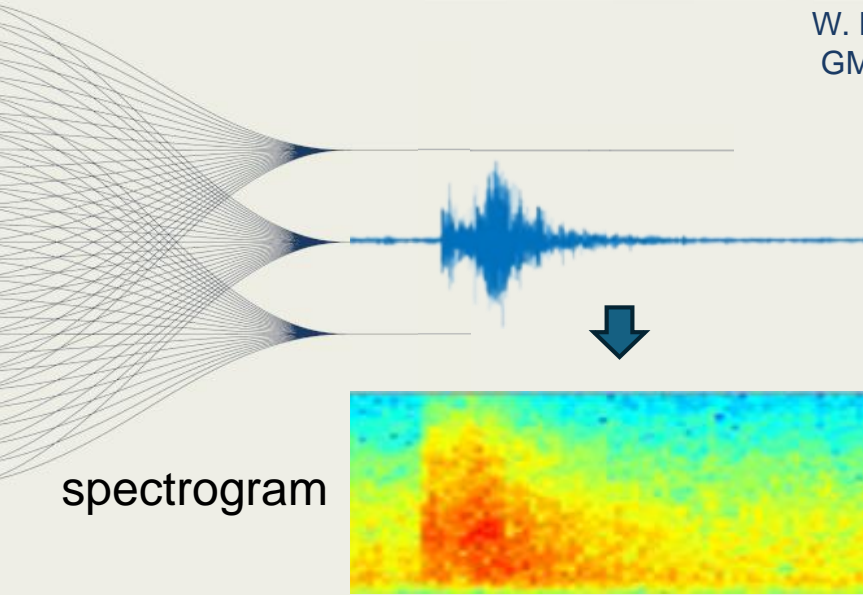# Precision Monitoring: A Scalable CNN-Based signal Classification Framework

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This study presents a CNN-based classifier for volcanic seismic signals, achieving high accuracy across four main classes (LP, TR, VT, TC). The model leverages an enhanced MobileNet architecture with Ghost modules to reduce computational cost while maintaining performance. The proposed classifier consists of three main steps:

1. Compute the spectrogram of the seismic signal.
2. Convert the spectrogram into an RGB image.
3. Input the RGB image into the proposed CNN for classification.

spectrogram

RGB image