SnT 2025
CTBT: SCIENCE AND TECHNOLOGY CONFERENCE
8 SEPTEMBER ONLINE DAY
9 TO 12 SEPTEMBER AT HOFBURG PALACE, VIENNA & ONLINE
LIGHTNING TALK
P3.5-442

Real Time Earthquake Detection Using YOLOv8 and Spectrogram Analysis

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- Our poster is about using deep learning to automatically detect and classify earthquakes, a method that dramatically speeds up seismic analysis.

- The vast scale of seismic data now exceeds what humans can analyze manually.

- We developed a complete pipeline: transforming raw seismic waveforms into spectrograms, then training a YOLOv8 model on a large auto-annotated dataset to not only detect but also classify events as local or regional.

- The model excels at classifying local (96%) and regional (91%) earthquakes with minimal confusion between them.

- Questions? Ideas? Find us at the poster!