SAND2023-04790C

SnT 2023
CTBT: SCIENCE AND TECHNOLOGY CONFERENCE
HOFBURG PALACE - Vienna and Online
19 TO 23 JUNE

Sandia National Laboratories

lightning Talks

P3.5-348

Testing a Paired Neural Network to Characterize Aftershock Sequences

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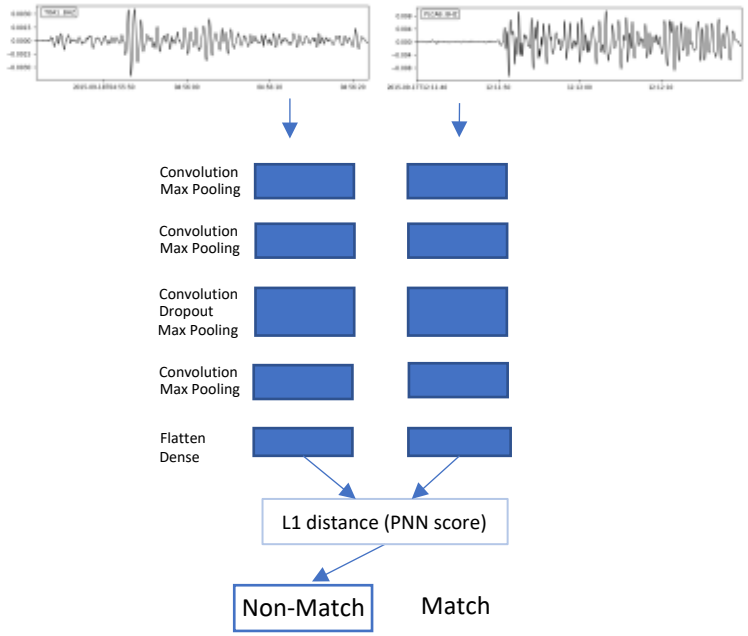
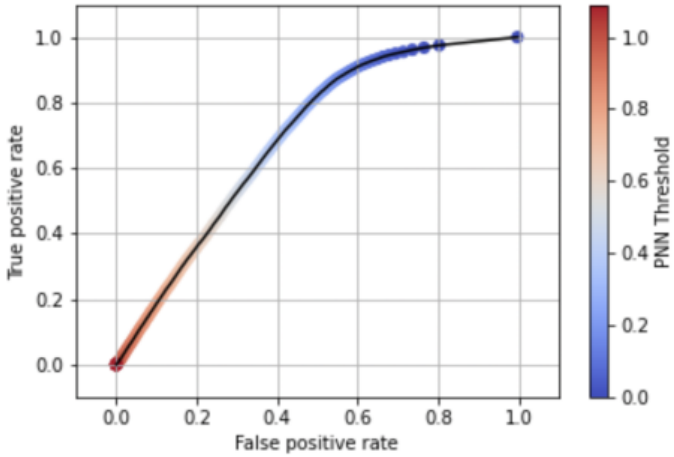
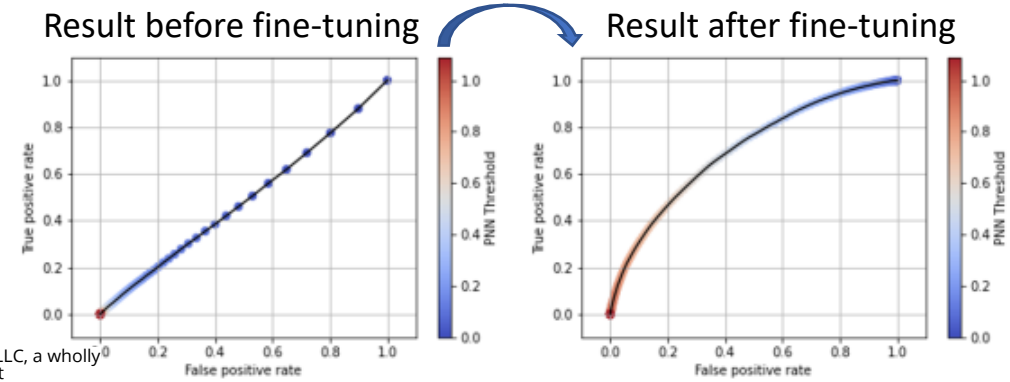
- We tested 6 different Paired Neural Network (PNN) models trained to recognize similar waveforms against 2 analyst-validated aftershock sequences.
- Goal: See if PNN model outperforms correlation.
  - PNN models trained using a constructed global earthquake dataset of similar waveforms (*to simulate aftershock similarity*).
  - Each waveform consisted of a high SNR waveform with added noise.
- We tested models according to 2 different 'Match' and 'Non-Match' criteria.
- Overall, the existing PNN models (trained with constructed data) struggled to generalize to the aftershock datasets.
- However, fine-tuning PNN models with some aftershock data indicates improvement.
- Come to the poster to discuss with us!



*Performance of the PNN models decreased when applied to real aftershock sequences



*Fine-Tuning the PNN Models may help



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