CSE 6242 Project Proposal Team 3

A Graph Neural Network (GNN) based Interactive Application for Earthquake Early Warning

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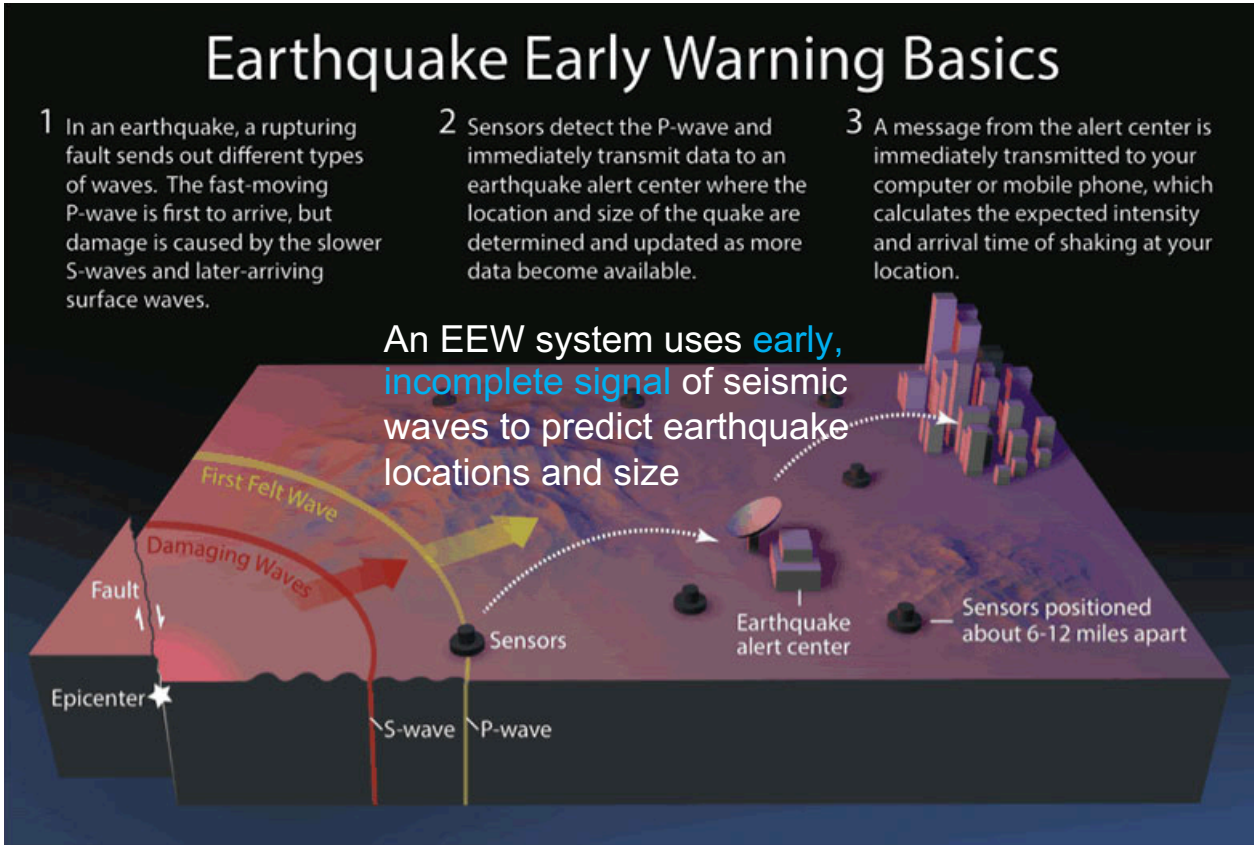
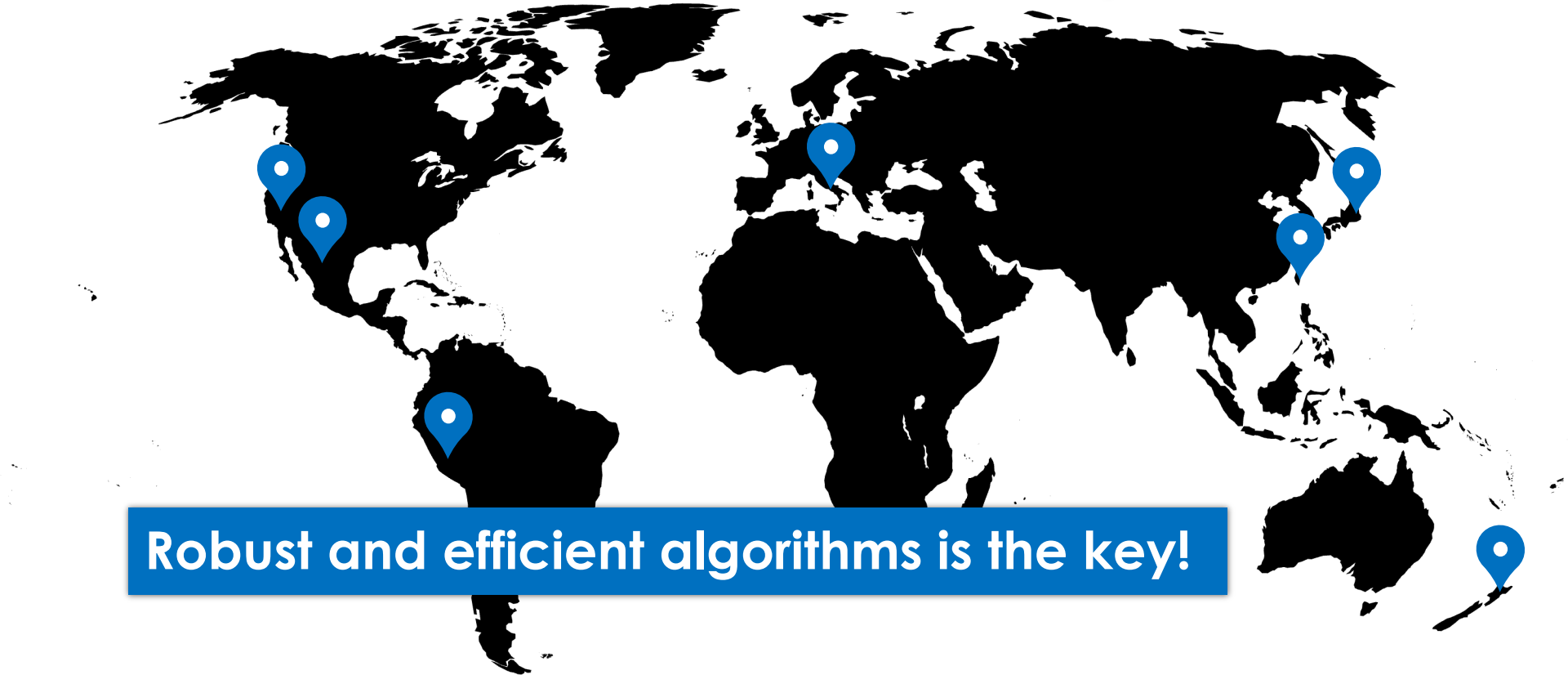
Earthquake Early Warning (EEW) Systems



EEW systems widely used in high-risk areas

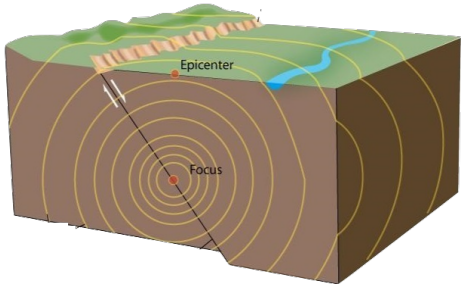
And they save lives!



Robust and efficient algorithms is the key!

Our approach toward an interactive GNN EEW system

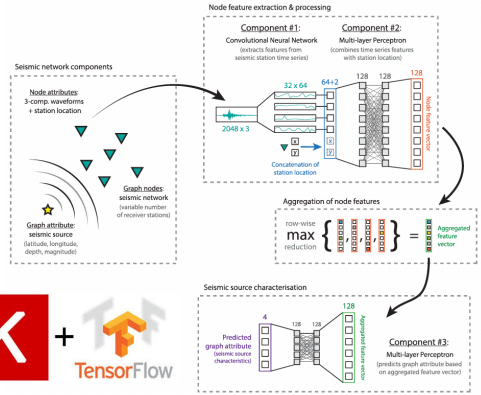
(1) Data scraping



ObsPy
A Python Framework for Seismology

pandas

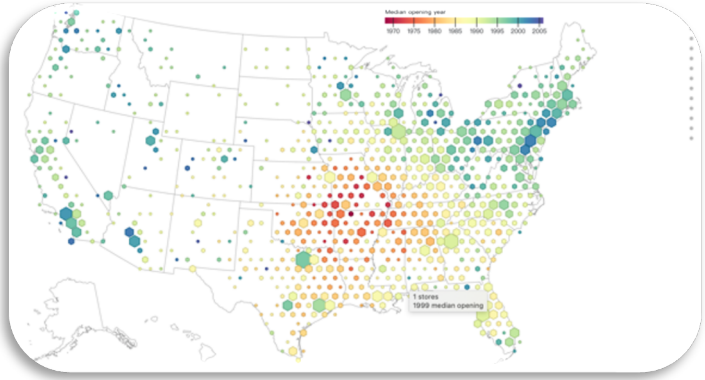
(2) GNN model



K + TensorFlow

(van den Ende and Ampuero, 2020)

(4) Interactive Map



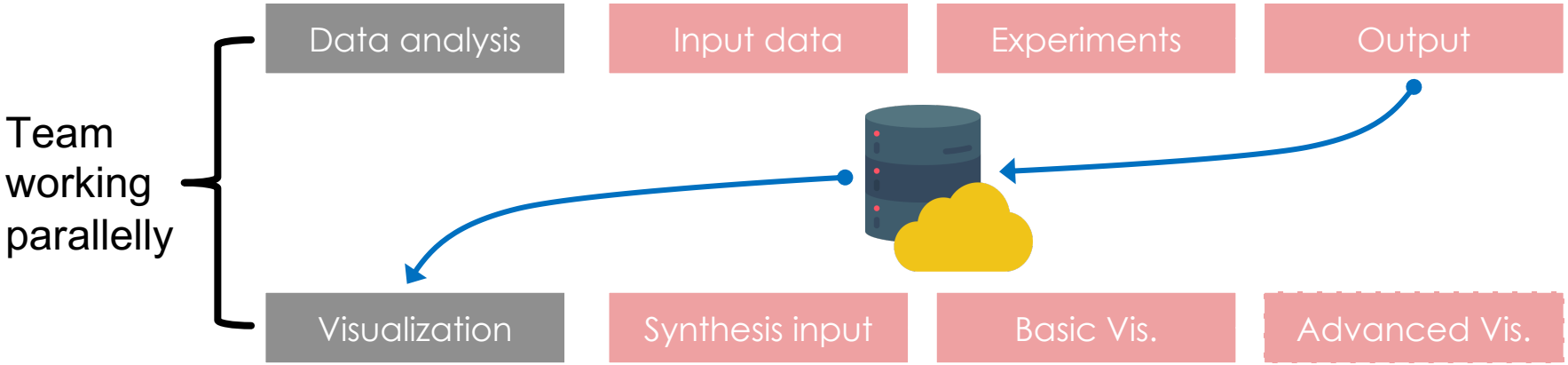
bokeh

Leaflet

(3) Data Storage

mongoDB

How long will it take? 4-5 weeks, practically no costs



check for success

1. Successfully building the application as planed
2. Prove GNN useful for Earthquake early warning system
3. The interactive visualization easy to use and showcase the insights of data