



Social listening for efficient emergency and disaster response

Utilizing real-time social media data and satellite imagery to deliver critical support services and optimize logistics

EPAM & Linktera4Good achieved this using:

• SAS® Viya® on Microsoft Azure • Natural Language Processing • Machine Learning • Geospatial Data • Open Source

SAS Hackathon 2023 • EMEA Regional Winner • Technology Winner for Natural Language Processing • Public Sector Track

Challenge

When disasters like February's horrific 7.8 earthquake in Turkey strike, governments, rescue teams and nongovernmental organizations need quick and reliable information amid the chaos. Response concerns include finding the most vulnerable people, food supply and clean drinking water; medical needs and safety; communication, and so on.

The first 72 hours are critical. So how do responders:

- Pinpoint the precise location(s) affected?
- Understand what's happening to people as it happens?
- Coordinate response across multiple organizations effectively?
- Deploy resources efficiently?

Innovation

The solution uses SAS® Viya® and open source to generate real-time, verified information for responders, combining data from social media with verifiable satellite imagery.

EPAM & Lintera4Good:

- Created a model that streamlines the decision-making process.
- Combined social media and geospatial data to identify the affected areas.
- Used advanced algorithms to filter out misinformation and validate crucial details.

Impact

Responders have a clearer picture of the situation, including locations of collapsed buildings and blocked roads. In a disaster, every second counts.

- Help the most vulnerable when a natural disaster occurs.
- The solution extends beyond earthquakes and can be applied to all response efforts.
- The potential for use in business and society is limitless.

“Technology has the potential to create profound change. Our solution revolutionizes disaster relief and can improve countless lives. We can create a safer, more resilient world.”

Güney Güzelkara • Business Analyst & QA Expert • Linktera