Supplier of an earthquake forecasting system utilizing space radiation detectors and satellite data is looking for partners to implement the solution and support further research

Summary

Profile type	Company's country	POD reference
Technology offer	**Poland**	**TOPL20240207006**

Profile status	Type of partnership	Targeted countries
PUBLISHED	**Research and development cooperation agreement**	**• World**

Contact Person	Term of validity	Last update
Johannes BÖHMER	**12 Feb 2024** **11 Feb 2025**	**12 Feb 2024**

General Information

Short summary

A company from south Poland is a supplier of an earthquake forecasting system utilizing space radiation detectors and satellite data. The company is looking for partners interested in applying their solution and supporting them in further research.

Full description

A company based in south Poland is a supplier of an AI earthquake forecasting system utilizing space radiation detectors and satellite data. It is a hardware-software solution encompassing several subprojects that uses deep learning technology and advanced data analysis algorithms.

The aim of their solution is to take earthquake detection systems to the next level. The search for earthquake precursors that could possibly warn authorities of important seismic activity and help decrease the number of casualties has been going on for several decades, and its results have divided the scientific community regarding its feasibility.

The offered system is an advanced and novel earthquake forecast and preparedness solution that resulted from a longstanding partnership with various scientific entities, including multiple universities and institutes. The key

innovation in the form of dedicated cosmic ray detectors will give global coverage, while the proprietary software offers unparalleled data analysis capabilities.

The company already works with an international team and currently is drafting a patent application. They participated in one of the most extensive and long-term skill development and promotion programs in Poland, serving as a platform for projects, inspiring the growth of the Polish startup ecosystem, and were awarded, among others, in regional and international contest for startups and innovative SMEs.

Considering significant potential of the solution, they intend to fill a market niche in the EU and beyond. Partners interested in implementing the offered earthquake forecasting system and supporting further research are sought.

Advantages and innovations

The system uses a unique strategy, combining time-series data from different physical measurements to identify variations that may indicate upcoming seismic activity through the utilization of a multimodal Convolutional Neural Network (CNN) architecture which models the dynamics features of multimodal on that time-series data. The utilization of space-related data encompasses space weather measurements obtained from ground-based detectors and observatories together with satellite-based data. For the success of forecast results, the company is deploying a dedicated, specialized ground detection system that ensures highly accurate space weather data for our deep machine learning models. Global detection system ensures widespread coverage and enables data acquisition from various locations worldwide.

Technical specification or expertise sought

Stage of development

Already on the market

IPR Status

IPR granted

IPR Notes

Sustainable Development goals

- **Goal 9: Industry, Innovation and Infrastructure**

Partner Sought

Expected role of the partner

Partners will be expected to support the implementation the solution and further research on the utilization of space-related data that could help in the identification of earthquake precursors.

Type of partnership

Research and development cooperation agreement

Type and size of the partner

• **Big company**

• **SME 11-49**

• **University**

• **Other**

• **R&D Institution**

• **SME <=10**

• **SME 50 - 249**

Dissemination

Technology keywords

• **10002009 - Natural Disasters**
• **10002010 - Remote sensing technology**

Targeted countries

• **World**

Market keywords

• **01005001 - Satellite services/carriers/operators**

Sector groups involved