A Spanish SME is developing a system to identify unrelated financial instruments with similar oscillatory behavior using multivariate time series analysis. They seek an SME form Portugal to apply for the Eurostars 3 call by September 12th.

Summary

Profile type	Company's country	POD reference
Research & Development Request	**Spain**	**RDRES20240607013**
Profile status	**Type of partnership**	**Targeted countries**
PUBLISHED	**Research and development cooperation agreement**	**• Portugal**
Contact Person	**Term of validity**	**Last update**
CEC CCIC EEN PORTUGAL	**7 Jun 2024** **7 Jun 2025**	**7 Jun 2024**

General Information

Short summary

A Spanish SME is developing a system to autonomously find, analyze, and validate financial instruments with high similarity in morphological-oscillatory behavior using the multivariate time series paradigm. They seek partners with proven skills in Machine Learning Engineering and DevOps from the Norte, Centro, Alentejo, and Algarve regions of Portugal to apply for the Eurostars 3 call, with a deadline on September 12th. This partnership aims to improve algorithmic trading models.

Full description

A Spanish SME is searching for a Devops & Machine Learning Engineering partner to apply for the Eurostars 3. The deadline is set on september 12th.
The Project consists of the development a system capable of identifying new uncorrelated financial instruments (outside Forex) with a high degree of similarity of morphological-oscillatory behavior (from the point of view of the oscillation of sine waves), based on the multivariate time series paradigm, as well as its subsequent operational validation in relevant simulated environments.
We are seeking for devops partner; an SME specialized in Machine Learning engineering.

The partner will be in charge of:

a. Architecture Design and Deployment: Creation of infrastructure for real-time searches and tracking the performance of new financial instruments.
b. Iteration and Continuous Improvement: Data collection from the prototype for adjustments based on performance and feedback from the analyst team.

The system will be improved based on performance and feedback from the analyst team.

Submission deadline for the call is september 12, 2024. We expect to complete the project in 36 months

Results will create a new product that can be commercialized to different potential users, such as banks, investment agencies, governments, etc. We are well positioned in the financial investment sector and in a position to market the resulting product with a high degree of profitability.

Advantages and innovations

Results foreseen will permit a multi-dimensional improvement in financial systems risk management.Technology created will be completely new and will permit new horizons of exploitation for the consortium and most of EU financial industries.

No one has done this before as a usable tool; no one can offer a similar instrument all over the financial sector; so we can say this is disruptive, since the application of AI techniques to this task has not yet been undertaken.

As it has been mentioned above, we've carried out some proofs of concept that indicate the possibility of carrying out the development proposed with a high degree of success. This positions us into TRL4.

Although we intend to validate the forex market as the main case of use, we foresee creating a flexible system able to find investment opportunities under lots of markets used as a reference.

We know no solution that can solve this problem in such a wide collection of cases.
Finance industry in Europe will benefit from this development, improving its transparency and increasing targets and ways to do investments.

Technical specification or expertise sought

We are looking for a devops profile; SME specialized in Machine Learning Engineering and DevOps with experience in deploying machine learning models. The partner should be in charge of Architecture Design and Deployment and Data Collection of the prototype for adjustments based on performance and feedback from the analyst team.

List of skills for a partner:
Especialistas en Machine Learnig Engineering y DevOps
Python, sckit-learn, TensorFlow o PyTorch, otras librerías de ML y Deep Learning.
Docker, Kubernetes.
Flask, FastAPI, TensorFlow Seving
Git, Grafana
Amazon SageMaker
Data processing, datalake

Stage of development

Concept stage

Sustainable Development goals

- **Goal 9: Industry, Innovation and Infrastructure**
- **Goal 8: Decent Work and Economic Growth**
- **Goal 17: Partnerships to achieve the Goal**

IPR Status

No IPR applied

Partner Sought

Expected role of the partner

Architecture Design: architecture for the solution design and validation environment design and procurement using technologies mentioned above.

Deployment and Data Collection of the prototype for adjustments based on performance and feedback from the analyst team: preparation of data for processing and modeling work with AI techniques explained above.

Type of partnership

Research and development cooperation agreement

Type and size of the partner

- **SME 11-49**
- **SME 50 - 249**
- **SME <=10**

Call Details

Framework program

Eureka

Call title and identifier

Eurostars call for projects sept. 2024

Submission and evaluation scheme

9/12/2024 12:00:00 AM

Anticipated project budget

Coordinator required

No

Deadline for EoI

11 Sep 2024

Deadline of the call

12 Sep 2024

Project duration in weeks

154

Web link to the call

Project title and acronym

Dissemination

Technology keywords

- **01003013 - Information Technology/Informatics**
- **01003003 - Artificial Intelligence (AI)**
- **01003006 - Computer Software**
- **01003016 - Simulation**

Market keywords

- **02007013 - Banks/financial institutions software**
- **02007016 - Artificial intelligence related software**

Targeted countries

- **Portugal**

Sector groups involved