Visual analysis of industrial and trade dynamics

What

A visual tool for analysing the industrial and trade dynamics across the globe. This tool will allow researchers, entrepreneurs and policy makers to analyse which manufactured goods different countries produce, and how their industrial specialisation evolves in the course of time, and how this affects the living standards.

Why

Researchers and policy makers need a better, continuously updated oversight of the evolution of trade and industrial specialisation, and of the benefits the various countries reap from the participation in international trade. Entrepreneurs need a tool that would allow them to analyse their performance at their existing key markets and to discover potential new markets.

The public statistical data, such as the Eurostat trade and industry databases are excellent at offering raw data but fall short on UI/UX and analytical tools.

Outcome

Conceptually, we build on cutting edge research in economics. We take an inspiration from the best elements of the various existing economic and business data visualisation applications and develop a product that would better meet the expectations of the policy makers and policy researchers.

The actual architecture and more specific functionality are to be determined together with the project team.

Initially, a Google Cloud application is sought, including
- Backend CloudSQL/MySQL database for storing and maintaining raw data;
- REST API for querying the above trade data;
- Python/Django compatible web front end that makes use of Chart.js.

Team

Two senior researchers (PhD) will supervise product design and provide guidance on data sources, architecture and key features of the planned software product. A simplified mock-up and data model of the planned product will be made available in the beginning of the project.

Earlier experience with web application development with Python/Django and MySQL/PostgreSQL would be a benefit for the software team.
**Conditions**

Any outcomes produced by the student team under and within the framework of the software project and any transferable intellectual property rights related thereto, incl. all the economic rights of the author and rights to protect intellectual property are transferred from the moment of creating them.

**Benefits**

Longer term collaboration would be sought with the team, subject to an agreement to be achieved towards the end of the current project.

In case a member of the team would be interested in pursuing further research on the use of open and big data, and data science in studying global trade and business, we would offer possibilities participation in a European research project that involves leading research centres across the world and offers possibilities for secondments to India, Brazil, Costa Rica, Malaysia, South Africa, Republic of Korea. Employment contract with the Institute of Baltic Studies or enrolment to doctoral studies at the Tallinn University of Technology is a prerequisite for pursuing this opportunity.

For further information, please contact:

Marek Tiits, marek.tiits@me.com