



Premia – Project Completion

DSI Infrastructures & Labs

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Project overview

Premia – A Prediction Market with Integrated Algorithms is an ambitious initiative aimed at improving prediction markets, which are virtual stock markets used to make forecasts by analyzing market values. Traditionally, these markets rely on the collective knowledge of groups, such as crowds or expert panels. Despite their proven effectiveness, prediction markets have seen little methodological innovation over the past few decades, particularly in integrating human intelligence with artificial intelligence (AI).

Premia seeks to change this by developing the first prediction market that systematically combines human and algorithmic trading. Drawing inspiration from financial markets, where trading algorithms are commonly used to enhance market efficiency, the project integrates forecasting algorithms and machine learning into traditional prediction markets.

This cutting-edge platform, once developed, will be accessible to the research community in Zurich and beyond. It will offer a unique environment for exploring a wide range of forecasting applications, from predicting the outcomes of replication studies to more broadly themed predictions.

Project achievements

During the project period, several prediction markets based on human intelligence have been conducted. Importantly, the prediction market has been applied to the 2023 Swiss general elections where it has been made known to a large community thanks to a media collaboration with the news portal Watson.

The project has also applied its forecasting tools to estimate CO₂ emissions from air travel at the University of Zurich and to predict geopolitical events, showcasing its potential to inform decision-making on critical issues. These prediction markets generated the data to systematically investigate biases in human forecasting on the platform in order to select among the trading algorithms that have been identified in the literature on algorithmic trading on financial markets.

Future

PREMIA will persist in the future and it is planned that it will get a major update in 2025 when trading algorithms are implemented. The project will remain accessible via the website www.premia-forecast.com.

It is important to mention that PREMIA already led to two follow-up projects. The first one is AWAIR – Anticipation and Warning of Air Travel Emissions at UZH. Based on the experiences with the prediction market on the forecasting of the CO₂ emissions, AWAIR forecasts CO₂ emissions from air travel at the University of Zurich

based on a prediction poll. The project is funded by the «UZH Reallabor» project line.

A second follow-up project is the Franklin Political Risk and Opportunity Index (FRISKOP). This index is conducted at the Franklin University Switzerland where one of the project-leaders has accepted a new position. Its methodology is based on the prediction market as applied with PREMIA.