

Joint Research Centre, European Commission, Ispra (Italy)



Nowcasting the euro area with social interaction

Konstantin Boss, Luigi Longo, and Luca Onorante

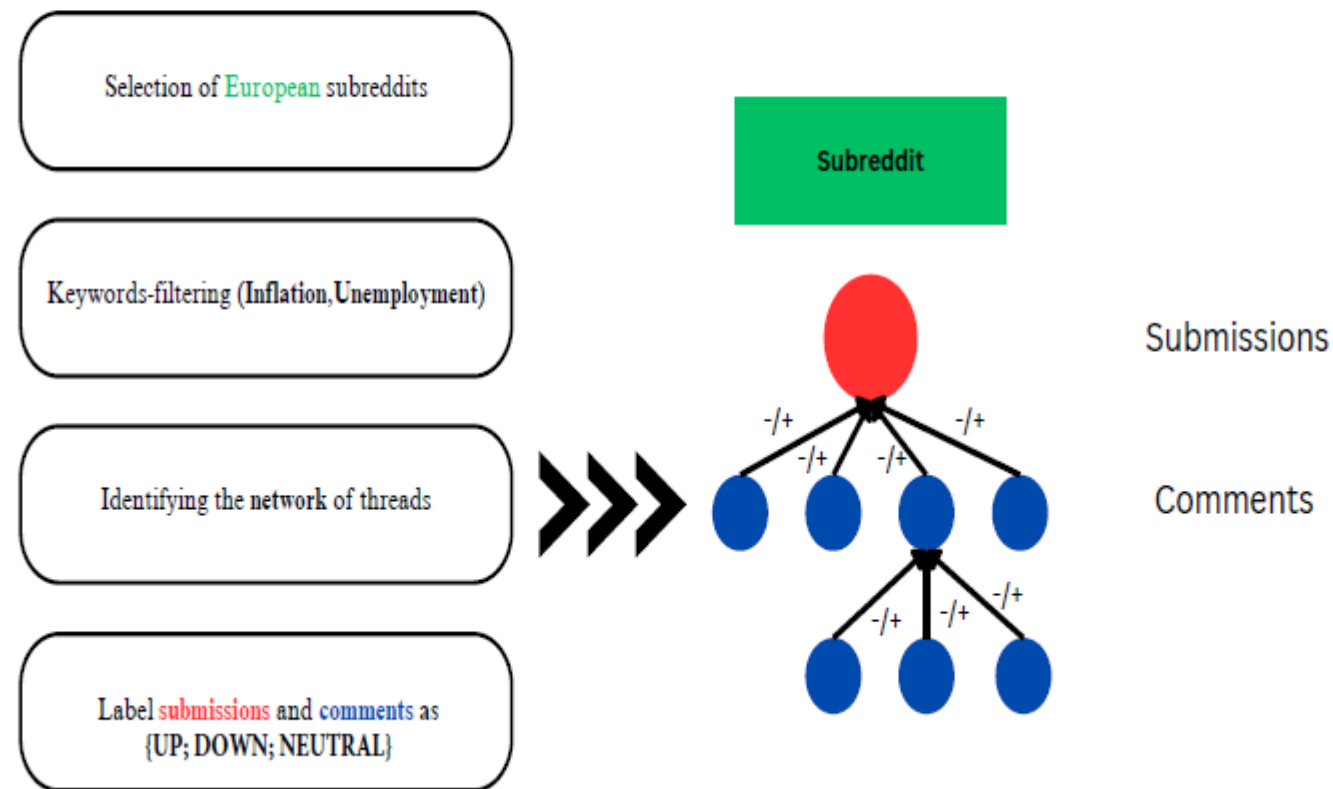
13th ECB Conference on Forecasting Techniques

Artificial intelligence in the analysis of economic narratives, forecasting, and risk assessment

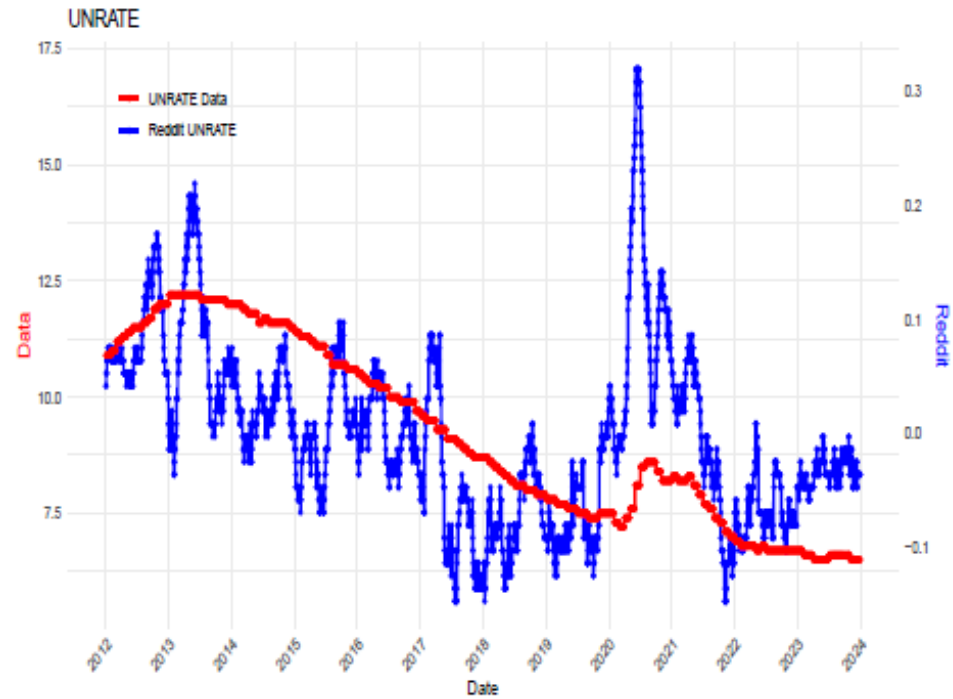
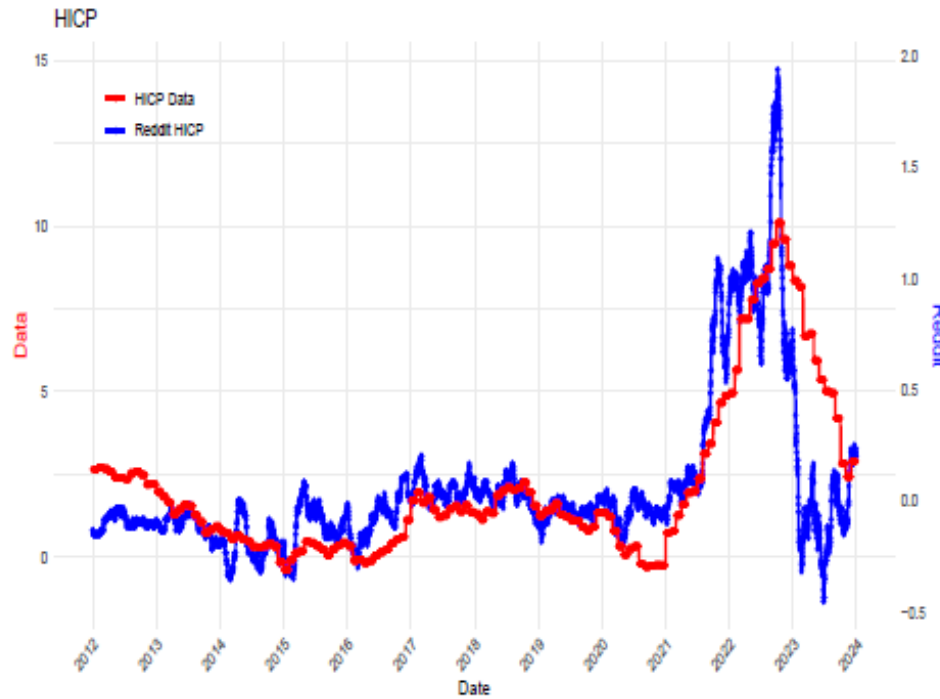
23 and 24 March 2026, Frankfurt am Main

AI for Social Media Research

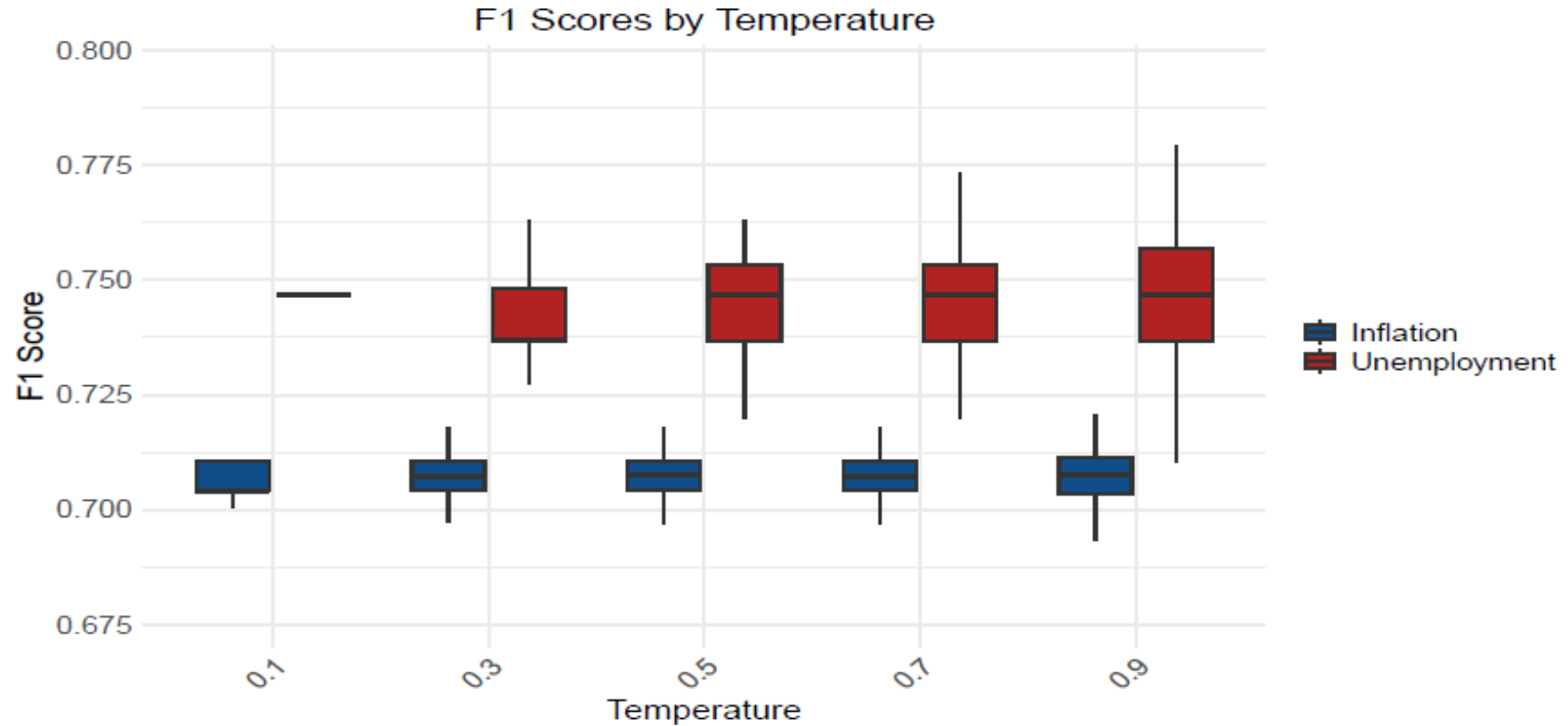
- ▶ We collect 750K submissions and 25M comments from *r/europe*



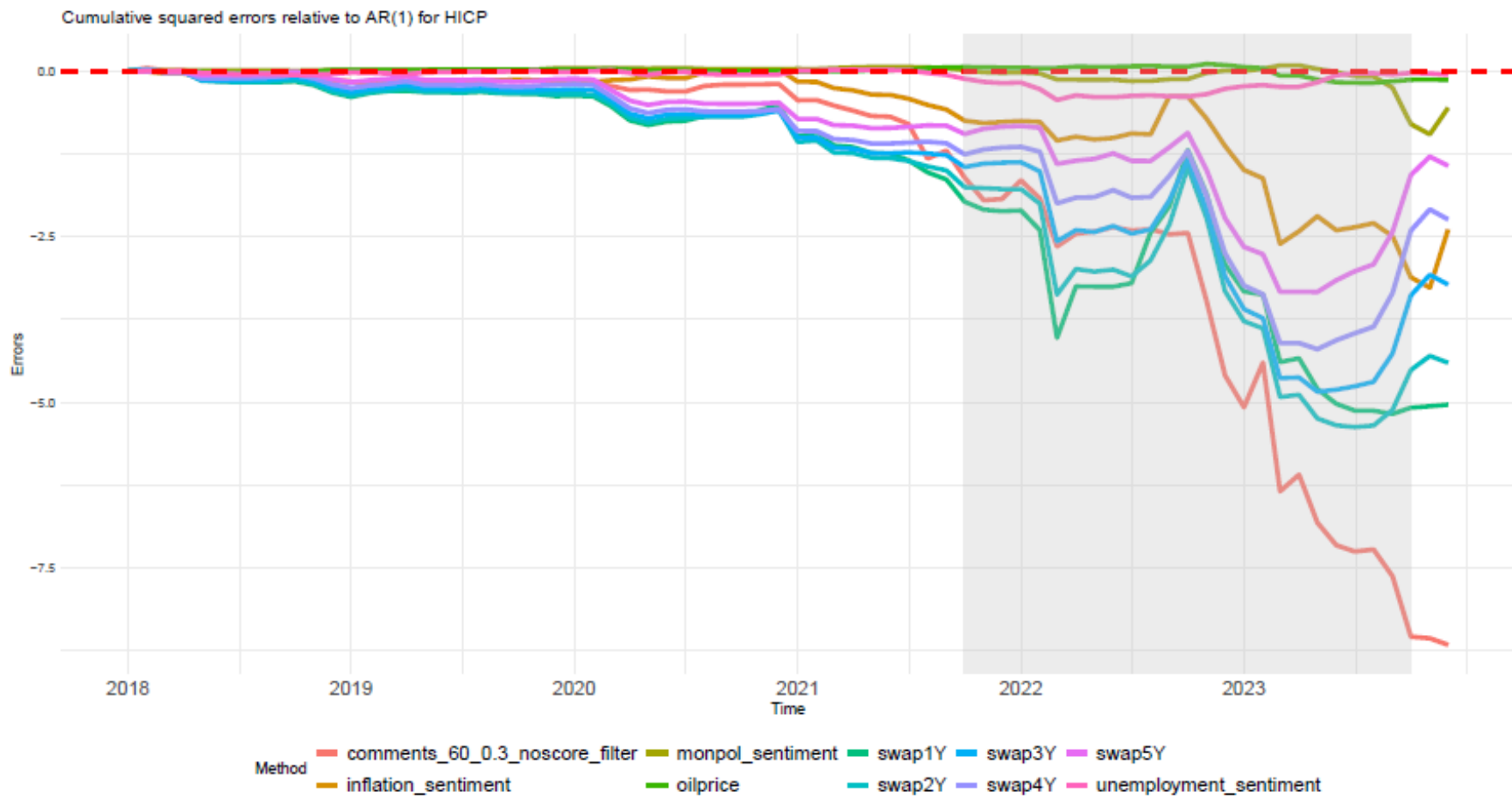
► LLaMa 70B extracts *forward-looking* inflation & unemployment signals



► LLM classifications are more accurate than dictionary approaches



► Reddit series are more useful than state-of-the-art indicators for nowcasts



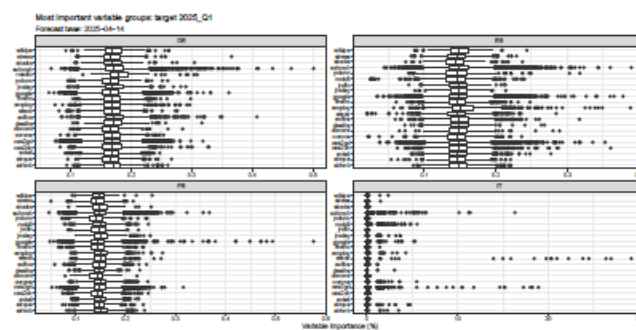
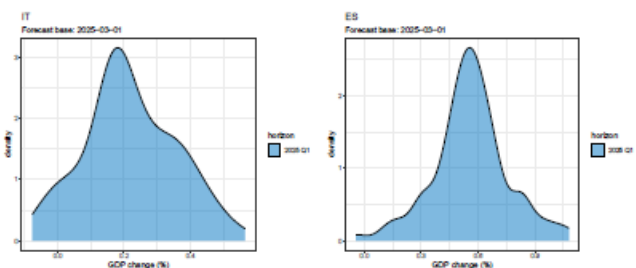
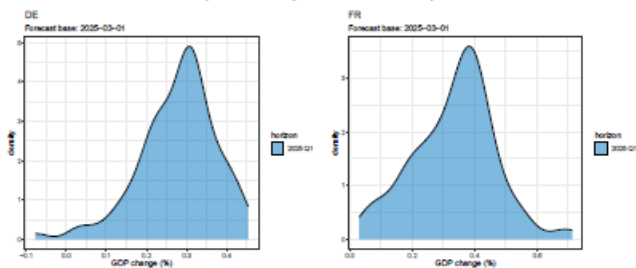
Big Data, Machine Learning & AI for Economics at the JRC

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Big Data and ML for Policy Work

- ▶ **Big Data sources:** Google, Wikipedia, Airbnb, Air Quality, GDELT, etc., published in *Joint Research Centre Data Catalogue*
- ▶ **ML Models:** ANN, XGBoost, Random Forest, Ensembles

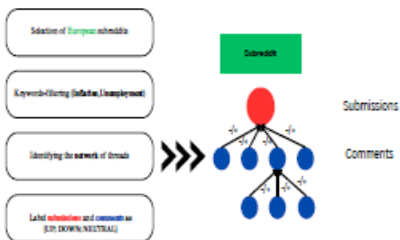


Other Policy Routines

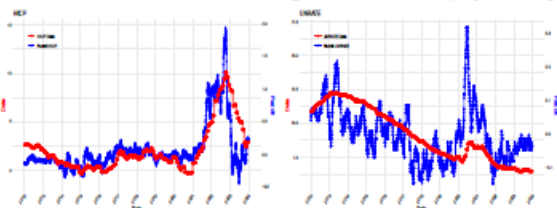
- ▶ GDP nowcasting (MF-BVAR)
- ▶ Inflation forecasts (MF-BVAR)
- ▶ NUTS2 GVA Nowcasts (DFM)
- ▶ Structural drivers of FX (BVAR)

AI for Social Media Research

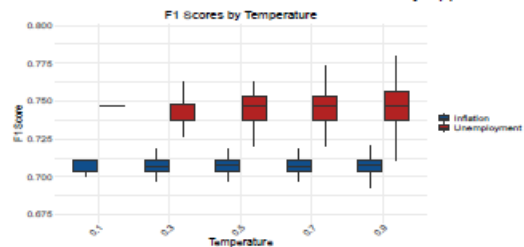
- ▶ We collect 750K submissions and 25M comments from *r/europe*



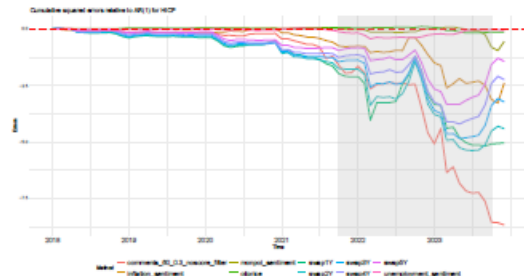
- ▶ LLaMa 70B extracts *forward-looking* inflation & unemployment signals



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Real-time Nowcast

- ▶ Updated real-time predictions from the AI for Social Media project.



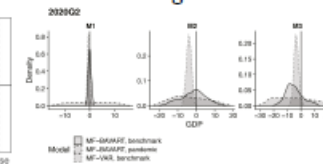
More Projects with ML, AI and Big Data

Forecasting Europe with newspaper data



(a) Barbaglia et al., 2023, JAE

Nowcasting with Bayesian Additive Regression Trees



(b) Huber et al., 2023, JoE

Disentangling nuances of policy uncertainty with LDA



(c) Azqueta-Gavaldón et al., 2023, EER