Construction of a sentiment measure using Google search volume

Keywords: [Natural Language Processing, Textual Analysis, Data Science, Big Data]

Project description
The goal of the IDP is to construct a daily and monthly sentiment measure using search volume from Google Trends. You will ultimately develop and test a code for automated data extraction from Google Trends and data processing. This code should allow for future updates and/or additions and changes. You will also incorporate several languages for textual analysis using a specific English financial dictionary as a base (for e.g., by using Google Translate in addition to other tools to accurately create alternative word lists in other languages).

The project includes the following tasks:

- Use Google Trends to analyze words related to positive and negative sentiment on a daily and monthly basis
- Use of sentiment word lists suited for financial context, and develop word lists for use in other languages (e.g., German, French, Japanese, Mandarin, Arabic)
- Extract local sentiment for specific countries
- Match google trends data with market return data
- Conduct some regressions and statistical analysis

What we are looking for
- Strong analytical and project management skills
- Determination and passion for your areas of expertise
- IT skills required for the IDP, in addition to advanced Python skills
- Interest to learn something about finance, in particular empirical asset pricing, equity markets, and behavioral finance
- 1-2 persons

What we offer
- Knowledge in quantitative finance, asset pricing, and behavioral finance
- Kick-off session including introduction to relevant finance and/or business topics
- Experience with IDPs
- Open dialogue and support
- If needed: Access to prime capital markets databases (Bloomberg, Datastream, Thomson Reuters, etc)
- Potential for publication and/or evaluation of future use cases
- Both single and group projects are possible

Interested?
Please send an e-mail with CV, academic transcript and your preference for this project to lisa.knauer@tum.de.

Questions?
In case of any (e.g. topic related) questions, please contact Lisa Knauer (lisa.knauer@tum or call +49 89 289 25482).