Fully funded 18-month full-time Postdoc research position
In mining and analysis of sentiments
at the ETIS Lab UMR 8051, CY Cergy Paris University, in Paris, France

The ETIS Lab (UMR 8051) of the CY Cergy Paris University has an immediate opening for a post-doctoral researcher. The position is funded by the H2020 EU-funded research project ANIMA (www.anima-project.eu/) and has secured funding for 18 months. The post-doctoral researcher will work under the supervision of Professor Dimitris Kotzinos and in collaboration with other researchers in his respective group.

This postdoctoral project will take an innovative multidisciplinary approach by developing Data Science (Big Data, Machine Learning and/or AI) based techniques to mine opinion models and do sentiment analysis around quality of life around airport regions and classify their aspects.

CONTEXT

Traditionally, opinion of people about different aspects of their lives were obtained through various types of surveys either made by person or online or more recently with the use of mobile apps. These kinds of surveys are though expensive and the researchers can reach only a limited amount of people. On the other hand, the recent explosion on social media content both in terms of volume and variety but also in timeliness, made platforms like Twitter, Facebook and Instagram an excellent source of people's opinions and sentiments towards various subjects. But data collected from these platforms carry an inherent bias (not everybody is using them) and this is sometimes amplified by the use of bots and other automated posting agents.

In order to further focus our research, data from additional platforms, where people post comments on their experiences (like TripAdvisor, Yelp or AirBnB), will be also used to collect opinions on some of the aspects of the quality of life. Additionally, data from external sources like land use and land value data sets will be crossed with the opinions collected in order to understand what is the actual impact of the opinions in the economy of the area.

RESEARCH OBJECTIVES

Modelling and capturing opinions and their evolution in a quality-of-life context is a new exciting area of interdisciplinary research. The work will combine properties arising from the online social networks with text analytical functions in order to form a model of opinions and then track the evolution of this model through subsequent interactions. We plan to do this through a series of learning and mining tasks over dynamic data, understand the boundaries of the existing algorithms for such tasks and propose new ones when needed. Besides the evolution of the opinions, we are interested in identifying the dynamics and correlations that affect the changes that will be observed. We would like to push the boundaries of the opinion mining and dynamics works while applying them to better understand the opinions and the sentiments of people around the specific subjects of quality of life and airport noise.

Key Responsibilities and Tasks:
- Developing new measures and methods for gathering opinion related data streams
- Developing new opinion mining methods, opinion models as well as algorithms to track their evolution
- Develop or extend methods for sentiment analysis, classification and aspect characterization with a focus on data related to quality of life and noise
- Co-authoring one or two project deliverables
- First-authoring top-tier peer-reviewed journals and conference proceedings
- Presenting findings at national/international scientific conferences
- Develop a toolkit that can be used for subsequent opinion mining studies

Qualifications and Skills/Experience:

- Ph.D. in Computer Science, Data Science, Artificial Intelligence/Machine Learning, or a related field. Applicants that will defend their PhDs before or around the beginning of the post-doc (04/2020) are also welcome to apply.
- Strong analytical and programming skills. Experience in tools used for big data analytics (in R, Python, Java or all) and in Cloud Computing environments is a plus
- Strong oral and written communication skills
- Demonstrated experience preparing conference presentations, research findings, and manuscripts for submission to peer-reviewed journals
- Language: the working language will be English

LOCATION
Cergy-Pontoise (suburb of Paris France).
The post-doctoral researcher will be located at the ETIS Lab (UMR 8051) at the CY Cergy Paris University.

TENTATIVE STARTING DATE:
As soon as possible.

APPLICATION
If interested, please send your application (including a detailed CV, university transcripts, a copy of the PhD thesis and/or scientific papers if available, as well as a list of personal references and a motivation letter) in PDF format to Professor Dimitris Kotzinos (Dimitrios.Kotzinos@u-cergy.fr) with title "Postdoc ANIMA". Further informal enquiries are also welcome.

Applications will be welcome until the position is filled, those submitted before 31/03/2020 will be considered in priority.