Postdoc Position in Machine Learning and Visualisation for Environmental Data

Information about air quality in cities is of great importance to control and mitigate air pollution and, thus, to protect human health. However, the quality of air in urban areas varies at a micro-location level, depending on multiple factors, such as the weather, traffic volume, the land use, etc. As such, advance big data techniques that allow the monitoring, prediction, and visualisation of air pollution, with the scope to extract and present information to citizens, governmental agencies, organisations, and companies, are of paramount importance.

In response to these research challenges, the big data group at the Department of Electronics and Informatics (ETRO) at Vrije Universiteit Brussel and imec is working on machine learning and signal processing models for environmental data analysis. By leveraging open and private air-pollution data, as well as environmental information harvested from public and proprietary APIs, we design systems that model the correlation between heterogeneous, air-pollution-related types of data and provide data predictions and visualizations.

We are looking for a postdoc interested to integrate in our team, which designs efficient approaches to data sensing/mining, representation, inference extraction, and visualization. Key responsibilities are:

- Contributing to the design and development of novel scientific algorithms and systems focusing on environmental data applications;
- Contributing to the preparation of scientific publications and patents;
- Guidance and supervision of junior researchers;
- Attracting funding through industrial and academic projects.

We are especially interested in candidates with the following profile:

- A PhD degree in machine learning, signal processing, data analysis, or related;
- Fluency in statistical analysis, neural networks, deep learning, Bayesian networks, dimensionality reduction;
- Research experience with high-dimensional data (sensor data, open linked data, images);
- An excellent academic record with publications in top-tier scientific journals and conference proceedings;
- Fluency in state-of-the-art machine learning tools (Python, Numpy, Tensorflow, Theano, Pandas) and data visualization packages;
- Fluency in English and excellent scientific writing skills;
- Experience in acquiring funding from national and international (European) funding bodies is a plus.

We are offering a two-year contract starting from March 2018 followed by a competitive salary. The successful candidate will work in an international scientific environment driven by excellence in research and industrial valorisation. The position provides a great opportunity to work closely with imec (https://www imec-int.com), a world-leading R&D and innovation organization with expertise in nanoelectronics, software and ICT, as well as with diverse partners in academia and industry.

Interested candidates can send: (i) a detailed curriculum vitae; (ii) a motivation letter related to the position’s profile; (iii) electronic copies of three key scientific publications; and (iv) two references by December 15, 2017 to the following email address: ndeligia@etrovub.be.

Any questions related to this position can address the following contact person:

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