PhD Researcher in Explainable AI for Computer Vision

The department of Electronics and Informatics (ETRO) at Vrije Universiteit Brussel (VUB) in Belgium offers a PhD position in designing deep-learning explainable models for Computer Vision.

Description of the project:
The successful candidate will work within the frame of a project, funded by the Research Foundation in Flanders (FWO), on explainable deep models for visual data processing. The project is in collaboration with the Computer Vision group led by Prof. Tinne Tuytelaars at KU Leuven. The project aims at alleviating an important shortcoming of Deep neural networks (DNNs), namely that they are often considered as black boxes, as their inner processes and generalization capabilities are not fully understood. To do so, we will tackle this problem by developing a new framework for AI that’s explainable and interpretable. Specifically, we will focus on (i) networks that are more interpretable by design and (ii) developing trustworthy methods for post-hoc interpretation and explanation.

Responsibilities:
- Design and implement innovative algorithms within the aforementioned project,
- Publish the results at top-tier venues in computer vision (e.g., CVPR, ICCV, TPAMI) and machine learning (e.g., ICLR, AAAI, NeurIPS), and
- Prepare a doctoral dissertation and support in teaching.

Profile and requirements:
- A MSc degree focusing on computer science, mathematics, electrical engineering or related;
- Prior experience with machine learning and/or computer vision is considered as a strong asset;
- An excellent academic record;
- Proven programming experience (e.g., Python, C++);
- Prior experience with state-of-the-art machine learning frameworks (e.g., Tensorflow, PyTorch) is a plus;
- Excellent oral and written communication skills in English (experience in publishing at international conferences/journals is a plus).

What we offer:
- A four-year fully funded PhD position with yearly progress evaluation;
- A competitive salary (including holiday allowance) and benefits,
- An international scientific environment driven by excellence in fundamental research,
- Opportunities for travelling to conferences and research visits to international partner research groups (e.g., at Duke University, UCL)

How to apply:
Interested candidates should send:
- a detailed curriculum vitae,
- a motivation letter related to the position’s profile,
- an academic record from BSc and MSc studies, and
- the names of two potential referees

to the following contact person: Prof. Dr. Nikolaos Deligiannis via email at ndeligia@etrovub.be by March 22, 2020.

About the team:
The position is within Big Data team at the Department of Electronics and Informatics at Vrije Universiteit Brussel, Belgium. The team is also affiliated with imec, an international R&D and innovation hub in nanoelectronics and digital technologies.