AKATECH

Postdoctoral

Ecole/Institution/Société:
KTH Royal Institute of Technology, **Sweden / Stockholm**

Discipline:
Applied Mathematics, Machine Learning

Type d'emploi::
Full-time

Date de publication:
2022-04-27

Personne à contacter:
If you wish to apply for this position, please specify that you saw it on AKATECH.tech

Postdoc in Computer Vision / Machine Learning / Applied Mathematics

KTH Royal Institute of Technology in Stockholm has grown to become one of Europe's leading technical and engineering universities, as well as a key centre of intellectual talent and innovation. We are Sweden's largest technical research and learning institution and home to students, researchers and faculty from around the world. Our research and education covers a wide area including natural sciences and all branches of engineering, as well as architecture, industrial management, urban planning, history and philosophy.

Job description

The division of Computational Science Technology is seeking a Postdoc in Computer Vision / Machine Learning / Applied Mathematics to handle scale-dependent image information in deep networks.

In our research, we develop deep networks for processing image data that handle scaling transformations and other image transformations in a theoretically well-founded manner. Our research in this area comprises both theoretical modelling of the influence of image transformations on different architectures for deep networks and the experimental evaluation of such networks on benchmark datasets to explore their properties.

The work also comprises the creation of new benchmark datasets, to enable characterization of properties of deep networks that are not covered by existing datasets. For examples of our previous work in this area, see https://www.kth.se/profile/tony/page/deep-networks

Within the scope of this postdoc position, you are expected to work on and contribute to the research frontier regarding scale-covariant or scale-equivariant deep networks and/or deep networks parameterized in terms of Gaussian derivatives, on specific research topics that we choose together.

The selected candidate will work closely together with the project leader Tony Lindeberg.

What we offer

- A position at a leading technical university that generates knowledge and skills for a sustainable future
- Engaged and ambitious colleagues along with a creative, international and dynamic working environment

- Work in Stockholm, in close proximity to nature
- Help to relocate relocate and be settled in Sweden and at KTH
- An opportunity to work on a project in the research frontier, with close links between theoretical analysis and experimental investigation/validation
- An interdisciplinary working environment where the candidate will have an opportunity to develop new complementary skills

Qualifications

Requirements

- A doctoral degree or an equivalent foreign degree, obtained within the last three years prior to the application deadline (With some exceptions for special reasons such as periods of sick or parental leave, kindly indicate if such reason exists in your resume).
- We are looking for a candidate with a PhD in Computer Vision, Machine Learning, Applied Mathematics or a related discipline dealing with automated analysis of image information.
- Previous experience with experimental evaluations using deep learning architectures applied to image data is necessary, preferably PyTorch.
- A theoretical background in continuous mathematics for modelling convolutions and the influence of image transformations on image data is also necessary.

Preferred qualifications

- Knowledge and skills that are meritorious for the position:
- As a person you have excellent scientific and collaborative skills, in combination with independence, with very good ability to get into new scientific theories and conduct implementations and experimental evaluations in close collaboration with the research environment you are working in. Awareness of diversity and equal opportunity issues, with specific focus on gender equality is also important.
- The preferred candidates should have demonstrated expertise (through publications) in any one of the following:
- Deep networks that handle image information for computer vision tasks, including experimental evaluation using modern architectures for deep networks.
- Continuous models for deep networks applied to image information.
- Theoretical modelling of scaling transformations or other image transformations applied to automated processing of image information.
- Great emphasis will be placed on personal competency.

Application

Log into KTH's recruitment system in order to apply to this position. You are the main responsible to ensure that your application is complete according to the ad.

The application must include:

- CV including relevant professional experience and knowledge.
- Copy of diplomas. Brief summary of previous work. (Max 2 A4 pages in legible font size).
- A statement of why you are interested in as well as suitable for this position. (Max 2 A4 pages in legible font size).
- Contact details of two academic referees.
- Information about when you would be available for this position

Your complete application must be received at KTH no later than the last day of application, midnight CET/CEST (Central European Time/Central European Summer Time).

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About the employment

The position offered is for, at the most, three years.

A position as a postdoctoral fellow is a full time qualified appointment focusing mainly on research, intended as a first career step after a dissertation.

Others

Striving towards gender equality, diversity and equal conditions is both a question of quality for KTH and a given part of our values.

Disclaimer: In case of discrepancy between the Swedish original and the English translation of the job announcement, the Swedish version takes precedence.

Type of employment: Full time

Contract type: Full time

First day of employment: According to agreement

Salary: Monthly salary

Number of positions: 1

Working hours: 100%

City: Stockholm

County: Stockholms län

Country: Sweden

Reference number: J-2022-0768

Contact:

- Tony Lindeberg, Professor, tony@kth.se
- Natasha Kapama, HR, kapama@kth.se

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