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The Norwegian University of Science and Technology (NTNU) creates knowledge for a better world and solutions that can change everyday life.

Professor in Artificial Intelligence and Machine Learning

**Faculty of Information Technology and Electrical Engineering
Department of Computer Science**

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[NTNU](#), together with [Telenor Group](#), is establishing a new professorship in Machine Learning, with an emphasis on challenges related to Big Data and the corresponding scalability of methods. The professorship is hosted by the [Department of Computer Science](#) (IDI), under the [Faculty of Information Technology and Electrical Engineering](#). The professor is expected to lead the development of the recently established Telenor-NTNU AI-Lab, and should have an outstanding record of research and scientific leadership. Telenor Group, one of the world's major mobile operators, is extending its business line to become a driving force in the digitalization of society. The vision of the AI-lab is to provide an attractive environment for high-quality education, research, and innovation in the fields of AI, Machine Learning, and Big Data Analytics through access to real data and problems within a collaboration between industry, research institutes, academia, and start-ups. Telenor Group will fund the first five years of the professorship, after which the department will ensure its continuation.

Machine Learning (ML) has been identified as a strategic growth area for NTNU as well as Telenor Group. Big Data is a strategic research area of the Faculty of Information Technology and Electrical Engineering, involving many professors and researchers from different departments (see <http://www.ntnu.edu/ime/bigdata>). The Telenor-NTNU AI-Lab is intended to be a centre for the study and development of a large range of ML methods, covering statistical methods, knowledge-based methods, and bio-inspired methods.

Information about the department

The Department of Computer Science currently has 28 full time professors, 58 associate professors, 19 adjunct professors, 37 postdocs/researchers, 65 PhD students, and 22 technical/administrative staff. The department has had research and educational programs in Artificial Intelligence and Machine Learning since the early nineties, with a strengthening in personnel resources as well as student interest over the last years. There is also research related to Machine Learning and Big Data analysis within other departments of the faculty, as well as applications of methods within NTNU more generally.

The department's research in Machine Learning contributes to the state-of-the-art of individual methods and algorithms as well as combinations of methods targeting particular tasks, for example, combining data-intensive methods with knowledge-based methods to produce user explanations for decision support. Our strongest contributions to the international research front until now have been within Bayesian learning and probabilistic reasoning, evolutionary learning and neural networks, and instance-based learning and case-based reasoning. In addition, we have ongoing activities at a high international level within large-scale data and information management. Over the last years there has been an increased interest in combined methods, e.g. integrating probabilistic and instance-based learning methods, or combining deep neural networks with reinforcement learning, applied to large volumes of data.

The department's research activities are to an increasing degree funded by external national and international funds. As of December 2016, we participate in 8 Horizon 2020 projects, out of 38 for NTNU in total.

The Telenor-NTNU AI-Lab

The Telenor-NTNU AI-Lab is a joint lab for research in Artificial Intelligence, Machine Learning, and Big Data Analytics. The lab was established in 2016, and will be operative from January 1st, 2017. It is hosted by the Department of Computer Science. The lab will conduct fundamental ML research, including theory and method development, as well as application-oriented research at a high international level. Lab facilities will also be available for other research groups within the Faculty of Information Technology and Electrical Engineering doing ML research, for NTNU more generally, and for external cooperating partners.

In addition to the professorship a set of PhD and Post Doc positions are planned for the AI-Lab.

Job description

The professor will take the leading role in the development of the Telenor-NTNU AI-Lab. The professor is expected to provide strategic and operational leadership of the lab, and together with other staff members conduct Machine Learning research of excellent quality and impact. The candidate is also expected to be an active player in application of external funding.

The professor will be a regular member of the department's scientific staff, with privileges and duties following from that, including teaching and student supervision. The professor is expected to be able to disseminate relevant parts of the research to a wider audience.

She or he is also expected to establish collaboration with relevant colleagues at other departments at NTNU.

Qualifications

We are looking for an experienced candidate for this professorship, with a background in Computer Science, with an excellent publication record in Artificial Intelligence with a focus on Machine Learning, and with documented experience from research within the scope of Big Data. The ideal candidate will have experience with learning methods that address the entire path from raw data, through levels of extraction, abstraction, and learned generalization, ending with output that the user can effectively utilize. The professor is expected to significantly strengthen the existing research at NTNU in the field of AI and Machine Learning.

Given the role as leader of the Telenor-NTNU AI-Lab, the candidate must document extensive experience in scientific leadership and project management. Priority will be given to candidates who have experience in strategic development of research labs or groups. Collaborative as well as communicative skills are essential, as are also personal abilities.

For a professorship, the applicant should be internationally recognized and have experience in initiating and leading research projects at a high international level. The applicant should demonstrate international experience and have a strong publication record in terms of papers in peer-reviewed journals and other relevant international publication channels. He or she should document the ability to obtain external funding from relevant sources, and have a national and international network.

Emphasis will also be put on educational training and experience, in terms of course development, teaching, and supervision. Experience with supervision of PhD candidates is of particular importance.

Requirements to the application

The application should contain:

- CV including information pertaining to the given qualifications and a full list of publications with bibliographical references
- Certified copies of testimonials and certificates
- The most important publications that are relevant for the evaluation of the applicant's qualifications (maximum 10 publications)
- A brief description of the scientific/technological relevance of the candidate's research
- Research proposal for the first five years of employment (maximum 10 pages)
- Information about educational experience, including development of study programs, curricula, teaching experience, and development of teaching methods and the learning environment. See "Documentation of an applicant's pedagogical qualifications" <http://www.ntnu.edu/vacancies/pedagogical-qualifications>
- Information about dissemination activities
- Other documents which the applicant would find relevant
- Names and contact information of at least two references

Joint works will also be evaluated. If it is difficult to identify the contributions from individuals in a scientific collaboration, applicants must enclose a short summary of her/his contribution.

NTNU expressively invites applications from qualified female scientists.

The applications will be evaluated by an international expert committee. Shortlisted applicants will be invited for interviews and trial lectures. The evaluation will not only take into account the accumulated academic production but also the applicant's potential for scientific development and personal qualities.

Formal regulations

Weight will be placed on pedagogical skills. The evaluation of the candidate will be based on documented pedagogical material, including pedagogical education/training, the presentation of academic work, and experience from supervising master-level students and doctoral candidates, and teaching as well as other pedagogical matters. The evaluation will consider both the quality and the scope.

Academic staff employed without prior formal pedagogical qualifications in university-level teaching, are required to complete a recognized course that gives a pedagogical qualification within two years of taking up the appointment. NTNU offers such courses.

Proficiency in the English language should be documented. New members of the academic staff who do not already master a Scandinavian language are expected to achieve proficiency in Norwegian or another Scandinavian language within three years of employment. This proficiency should correspond to level three in the "Norwegian for foreigners" courses provided at the Department of Language and Literature at NTNU.

The appointment is to be made in accordance with the regulations for state employees and civil servants in Norway. The candidate must adhere to regulations that concern changes and developments within the discipline and/or the organizational changes concerning activities at NTNU.

The position of Professor is placed within code 1013 of the State salary regulations, and is remunerated according to the Norwegian government state salary scale. 2 % of the salary will be deducted as an obligatory premium to the Norwegian Public Service Pension Fund.

Under Section 25 of the Freedom of Information Act, information about the applicant may be made public even if the applicant has requested not to have his or her name entered on the list of applicants.

Applications are to be submitted electronically through this website. Preferably, all attachments should be combined into a single file.

Further details about the position can be obtained from Department Head, Professor Letizia Jaccheri, phone (+47) 73 59 34 69 (email: letizia@idi.ntnu.no), or Associate Professor Heri Ramampiaro, phone (+47) 73 59 14 59 (email: heri@idi.ntnu.no).

For information about processing of applications, please contact Senior Executive Officer Anne Kristin Bratseth, phone (+47) 73 59 67 15 (email: anne.kristin.bratseth@ime.ntnu.no)

Reference no: IE 012-2017.

Application deadline: March 31st 2017.

