

Assistant Professor in Applied Statistical Modelling and Machine Learning, Technical University of Denmark, Denmark.

Description

Assistant Professor position is offered at the Section for Statistics and Data Analysis, a part of Department of Applied Mathematics and Computer Science at the Technical University of Denmark (DTU Compute). Our department DTU Compute is an internationally unique academic environment spanning the science disciplines mathematics, statistics and computer science.

At the same time we are an engineering department, covering informatics and communication technologies (ICT) in their broadest sense. Finally, we play a major role in addressing the societal challenges of the digital society where ICT is a part of every industry, service, and human endeavor.

You will be working within the area of applied statistics, focusing on synthesizing statistical modeling with tools such as statistical learning; aspects of machine learning, deep learning and standard statistical analysis tools where appropriate, based on a data driven approach. Both method justification in terms of theoretical considerations and practical feasibility will be part of the work.

Responsibilities and tasks

PACE – Proactive Care for the Elderly with Dementia - is a partnership formed by DTU Compute, Center for Design, Innovation and Sustainable Transition at Aalborg University Copenhagen, Skovhuset (Hillerød Municipality), The SIF group, Copenhagen Business Hub and Kullegaard. PACE is financed by Innovation Fund Denmark.

You will, as part of PACE, explore Big Data to detect changes in practices among elderly with dementia, aiming at preventing hospitalizations, by combining information from already existing technologies.

- With basis in longitudinal sensor information from intelligent floors, sensor staffs, alarm calls and additional sensor- and other information, you will build a procedure that, for each of the individual nursing home residents followed, will construct a concept of ‘normal behavior’, detected on an automatized basis. You will make the construction in such a way that natural variation in sensor readings etc. is incorporated to not indicate that the resident is changing behavior and will not trigger a violation of the individual ‘normal behavior’ concept.
- You will detect and classify changes that fall outside normal behavior, essentially giving a pointer towards which disease (if any) that caused the deviation, and the severity of the implications.
- You will be participating in the implementation of such a system.

Qualifications

Candidates should have a master’s degree in engineering or equivalent.

You should have a Masters degree or equivalent academic qualifications within mathematics/statistics, computational science and engineering, engineering, or equivalent areas. Programming skills in at least one language such as R, Matlab, Python, Java or C is essential.

You should, in addition, have an interest in seeing mathematics, statistics and machine learning be put to practical use, and appreciate to operate among professionals from several disciplines far from technical science, while still being placed in a department that has this as its main focus.

- You have the ability to deal with statistical modeling in Big Data, the central qualification.
- You have excellent collaboration skills to match close collaboration and an interdisciplinary environment, and mastering of the English language, are essentials.
- At the same time, you are innovative and enterprising, and enjoy sharing your ideas with colleagues.

We offer

DTU is a leading technical university globally recognized for the excellence of its research, education, innovation and scientific advice. We offer a rewarding and challenging job in an international environment. We strive for academic excellence in an environment characterized by collegial respect and academic freedom tempered by responsibility.

Salary and terms of employment

The appointment will be based on the collective agreement with the Confederation of Professional Associations. The allowance will be agreed upon with the relevant union.

You can read more about career paths at DTU here.

Further information

Further information may be obtained from head of project Anders Stockmarr, tel.: +45 4525 3332, anst@dtu.dk, or head of section Bjarne Kjær Ersbøll, tel.: +45 4525 3413, bker@dtu.dk.

You can read more about DTU Compute at compute.dtu.dk/english.

Application procedure

Applications must be submitted as one PDF file containing all materials to be given consideration. To apply, please open the link "Apply online", fill out the online application form, and attach all your materials in English in one PDF file. The file must include:

- Application (cover letter)
- CV
- Diploma (MSc)

Applications will be evaluated continuously.

All interested candidates irrespective of age, gender, disability, race, religion or ethnic background are encouraged to apply.

DTU Compute has a total staff of 400 including 100 faculty members and 130 Ph.D. students. We offer introductory courses in mathematics, statistics, and computer science to all engineering programmes at DTU and specialised courses to the mathematics, computer science, and other programmes. We offer

continuing education courses and scientific advice within our research disciplines, and provide a portfolio of innovation activities for students and employees.

DTU is a technical university providing internationally leading research, education, innovation and scientific advice. Our staff of 6,000 advance science and technology to create innovative solutions that meet the demands of society, and our 11,200 students are being educated to address the technological challenges of the future. DTU is an independent university collaborating globally with business, industry, government and public agencies.