Meteorologisk institutt

Jobbnorge ID: 299794
Deadline: 5/7/2026
Website: https://www.met.no/
Scope: Fulltime
Duration: Temporary

About us

The Development Centre for Weather Forecasting has more than 50 research scientists (natural and social sciences) and 10 research meteorologists in Oslo, Tromsø, and Bergen. The Centre is dedicated to user-informed, research-driven development of services, and is responsible for MET Norway's automated value chain for weather forecasting. Hereby, the Centre has an important role in supporting MET Norway's responsibility on the delivery of 24/7 operational services. The Centre has extensive national and international collaborations and research projects. Its organization emphasizes flexibility and interdisciplinarity, which is especially important in user and stakeholder engagement. The candidate will be embedded in a multidisciplinary research environment combining expertise in machine learning (ML), numerical modelling, satellite remote sensing, and Arctic geosciences.

The Centre is actively involved in the World Meteorological Organization (WMO) Polar Coupled Analysis and Prediction for Services (PCAPS) program. Through this engagement, MET Norway contributes to the development of polar prediction science, services, and best practices in close collaboration with international partners. The Postdoctoral Researcher may have opportunities to engage with relevant WMO PCAPS task teams and working groups, gaining experience in international scientific collaboration and contributing to community- and user-driven advances in Arctic prediction.

The Norwegian Meteorological Institute (MET Norway) has a vacancy for a 3-year Postdoctoral Researcher position at the Development Centre for Weather Forecasting in Oslo.

Postdoctoral Researcher - AI-based Ultra-high-resolution sea-ice forecasting for Arctic navigation

About the position

The position will contribute to the IceBox project, which aims to develop a next-generation "Forecast-in-a-Box" system capable of delivering ultra-high-resolution (100-500 m) sea-ice and weather forecasts onboard Arctic vessels using machine learning and edge computing technologies.

We are looking for a Postdoctoral Researcher with a strong background in machine learning, geosciences, or computational sciences to contribute to the IceBox project, which aims to develop an innovative AI-driven forecasting system for Arctic navigation.

Increasing Arctic maritime activity requires reliable environmental information for safe navigation. However, current operational sea-ice forecasting systems operate at spatial resolutions that are too coarse to resolve fine-scale sea-ice features relevant for tactical navigation. IceBox addresses this challenge by developing machine-learning-based forecasting models capable of predicting sea-ice drift and deformation at hundred-meter scales using high-resolution satellite imagery and in-situ observations.

A key innovation of the project is the "Forecast-in-a-Box" concept, where machine-learning forecasting models, satellite data, and observational inputs are integrated into an edge-computing platform that can run locally onboard vessels. This system will integrate satellite imagery, drifting buoy observations, and ship-based sensors to generate real-time forecasts and decision-support products for Arctic operations.

The Postdoctoral Researcher will contribute to the development of machine-learning models and data-fusion approaches for ultra-high-resolution sea-ice forecasting, including the integration of satellite remote sensing data and in-situ observations. The work may involve developing optical-flow-based prediction methods, training deep learning models on large satellite datasets, and contributing to the integration of forecasting workflows into the IceBox system.

The candidate will work closely with an interdisciplinary team of scientists at MET Norway and the Nansen Environmental and Remote Sensing Center (NERSC), including experts in machine learning, sea-ice remote sensing, and Arctic forecasting. The position involves close collaboration with the NERSC team, and the candidate may undertake research stays in Bergen to support joint work on remote sensing and machine-learning-based tasks. The project also includes collaboration with operational partners, and may involve participation in field campaigns and onboard testing of prototype systems.

The working language at MET Norway is Norwegian. Fluency in written and spoken English is required, and foreign applicants are expected to learn Norwegian over time. Training courses will be provided.

Expected impact

The project aims to advance the state of the art in AI-based environmental forecasting and edge computing for geoscience applications.

Expected outcomes include:

- Development of machine-learning models capable of predicting sea-ice drift and deformation at 100-500 m spatial resolution
- Integration of satellite observations, buoy measurements, and ship-based data into data-driven forecasting systems
- Demonstration of real-time forecasting workflows running on portable GPU-based edge computing platforms
- Contributions to improved environmental information for safe and sustainable Arctic maritime operations

Qualifications

Required skills and qualifications

- PhD in geosciences, computational science, physics, or a related field
- Strong programming skills in Python and scientific computing in a Linux environment
- Strong expertise in machine learning and deep learning, including experience developing, training, and evaluating neural network models
- Experience applying machine learning to large geospatial, Earth observation, or environmental datasets
- Ability to work independently and take responsibility within an interdisciplinary research environment
- Good collaborative and communication skills
- Good oral and written communication skills in English

Desired / beneficial qualifications

- Experience with sea-ice and/or Arctic weather prediction
- Experience with high-resolution satellite remote sensing data and geospatial processing workflows (radar and/or optical sensors are an advantage)
- Experience with computer vision methods such as optical flow or motion estimation
- Experience with geospatial data processing (NetCDF/CF, GeoTIFF, xarray, GDAL/rasterio)
- Experience with GPU computing or deep learning frameworks (e.g., PyTorch, TensorFlow)
- Interest in translating research results into operational forecasting systems
- Fieldwork experience or willingness to participate in Arctic field campaigns

Conditions

- We can offer a good working environment with professional challenges in a modern, technological environment
- Salary on the governmental salary scales as a Postdoctoral Researcher, dependent on qualifications and experience, NOK 595.000 - 700.000 pr. year
- Membership in the governmental pension scheme (2% deducted from gross salary)
- The position is for a period of three years.
- Preferred starting date: 1st July 2026 (or as soon as possible thereafter).

We emphasize diversity and therefore encourage everyone qualified to apply for a job regardless of age, gender, disability, national or ethnic background. MET Norway participates in the state's effort to get more people with holes in the CV or impaired ability to work. Information on gaps in CV or impaired ability can be used for reporting purposes.

In case an applicant does not wish to be registered on the public application list, the applicant will need to give a reasonable justification. Information about the applicant can still be published. If the wish to not be registered on the public application list is denied, the applicant will be informed prior to the disclosure.

The application

The application with CV and other attachments is sent electronically via Jobbnorge.no. Attach certificates and all pages of diplomas. The documents must be in Norwegian, a Scandinavian language or English. Translations must be authorized. Before any employment, we will check the documents. In the case of foreign education, we ask that you attach an explanation of the grading system.

Additional information

Contact person:

Jørn Kristiansen, Director of Development Centre for Weather Forecasting
Phone: +4746420054 | E-mail: jornk@met.no

Place of service:

Henrik Mohns Plass 1 0371 Oslo (Oslo Municipality)