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Prof Holger Hoos
Confederation of Laboratories for Artificial Intelligence Research in Europe (CLAIRE)
Leiden Institute of Advanced Computer Science (LIACS)
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Dear Professor Hoos

Letter of support for CLAIRE

The European Centre for Medium-Range Weather Forecasts is a research institute and a 24/7 operational service, producing global numerical weather predictions and other data for our 34 Member and Co-operating States and the broader community. The European Centre has one of the largest supercomputer facilities and meteorological data archives in the world. Other strategic activities include delivering advanced training and assisting the World Meteorological Organisation in implementing its programmes. ECMWF also operates two services from the EU's Copernicus Earth observation programme, the Copernicus Atmosphere Monitoring Service and the Copernicus Climate Change Service. We also contribute to the Copernicus Emergency Management Service, by computing flood and fire hazards.

As one of the leading centres for numerical weather prediction ECMWF is well aware of the great opportunities that artificial intelligence, and in particular machine learning, offer for the future of weather and climate. The potential application areas for artificial intelligence are spread across the entire workflow of weather and climate predictions that spans from the collection and quality control of observations, the assimilation of those observations into the framework of a weather and climate models to generate initial conditions for simulations, the forecast simulations as such, as well as the processing of model output data and the generation and dissemination of forecast products.

ECMWF is in the process of developing significant expertise in artificial intelligence and aims to become the focal point of artificial intelligence applications for weather and climate science within Europe and beyond. To be successful, ECMWF will need to bridge the gap between domain scientists for weather and climate simulations, and experts for artificial intelligence and machine learning. To this end, and to strengthen the community of artificial intelligence in Europe, ECMWF will liaise actively with CLAIRE. As a first step, ECMWF will seek to attract a number of participants from the CLAIRE community to join workshops and meetings on machine learning that are organised at ECMWF, including a workshop on *Machine Learning for Earth System Observation and Prediction*.

ECMWF is expressing strong support for the vision of CLAIRE to enhance, interconnect and co-ordinate artificial intelligence within Europe.

Yours sincerely



Dr Florence Rabier
Director-General