

Case study:

CLAIRE TASK FORCE ON AI & COVID-19

1.1. What best characterises the case study you are submitting? Is it an example of an application of data and new technologies or rather a framework or policy?

- Data and technologies APPLICATION
- FRAMEWORK or POLICY
- other

1.2. Case study description

Please provide a brief description of the case study, and the overall purpose.

In March 2020 CLAIRE (Confederation of Laboratories in Artificial Intelligence Research in Europe) launched a volunteer effort to help tackle the pandemic and established a task force to coordinate the contribution of the AI experts supporting it. This task force collected information on leveraging AI techniques in the context of COVID-19 and supported the development of new projects, connecting the European network of AI experts together with health institutions and governments. By the end of March, the task force had enrolled 150 volunteers, covering the full spectrum of AI methods, tools and technologies.

The task force was able to assemble a vast catalogue of AI & COVID-19 related resources covering Funding opportunities (21 calls), Datasets (30 resources), Hackathons challenges and webinars (7), and other initiatives (71). Moreover the 7 thematic groups of volunteers achieved important outcomes in several areas, from bioinformatics to robotics, and some of these outcomes have been already released to the public.

1.3. Background information / urls

please provide links to background information, reference documents, etc.

<https://covid19.claire-ai.org/>

Addressing potential challenges related to the use of users' data

Please provide a brief description of how one of more challenges related to the use of users' data are being addressed. We refer to the BPF's [Data and New Technologies Issues Card](#) for a list of potential issues and challenges. Feel free to suggest additional challenges.

2.1 Data collection

Please provide a brief description of how one of more challenges related to data collection are being addressed. We refer to the BPF's Data and New Technologies Issues Card, but you can also discuss additional challenges that are not yet included on the Issues Card.

Availability of data had been one of the main challenges we faced within the task force. Almost all the research groups had difficulties in collecting data due to the privacy regulation, missing data collection policies, lack of an integrated data acquisition and storage pipeline at health institutions and at governments level.

2.2 Data Storage

Please provide a brief description of how one of more challenges related to data storage are being addressed. We refer to the BPF's Data and New Technologies Issues Card, but you can also discuss additional challenges that are not yet included on the Issues Card.

We identified the lack of a common European Cloud to share in a safe, legal and interoperable way health data for research purposes. Moreover, the few already existing public-private partnerships (e.g. to collect data on medical imaging) lacked transparency on the management of the data and future accessibility of products derived from such (eg. whether derived models will be publicly available).

2.3 Labelling and unlocking value

Please provide a brief description of how one of more challenges related to labelling and unlocking value are being addressed. We refer to the BPF's Data and New Technologies Issues Card, but you can also discuss additional challenges that are not yet included on the Issues Card.

We identified the difficulty to have enough labelled data to present to AI systems when a new dynamic and volatile non-deterministic environment emerges such as a pandemic. This means that we need to start addressing the development of AI self-learning and adaptation to an unlabeled world with the ability to self-build knowledge to represent a particular situation.

Furthermore, in emergency, allowing secondary uses for already collected data can be beneficial. Clear and expedite ways for granting for exceptions (and oversight mechanisms) could be considered.

2.4 Data sharing

Please provide a brief description of how one of more challenges related to data sharing are being addressed. We refer to the BPF's Data and New Technologies Issues Card, but you can also discuss additional challenges that are not yet included on the Issues Card.

Lessons learned

3. In addition to the information provided above, is there any other experience (successful or less successful) you wish to highlight? The BPF is interested in understanding what worked well and what has proved to be less successful.

The cooperation of researchers from various European institutions within the COVID-19 Task Force has clearly demonstrated the need to build a European AI ecosystem to support the development of strategic areas like Health, to foster the AI research and to improve the quality of life for all European Citizens.

We also learned the importance of setting up agile, fast-response mechanisms to mobilise experts from different domains. These mechanisms include tools for identifying and calling-up experts based on expertise ; maintain permanent dialogs between researchers, field experts, policy makers and interest groups (including technology and risk assessments, as well as foresight exercises); set-up flexible infrastructures for data-sharing that support emergency use (with e.g. in-built privacy by design). This experience can be re-used by CLAIRE to manage future emergencies or new challenges.

Suggestions for further work

4. You can use the space below for suggestions for further BPF work on the issue. These can be ways in which the BPF can continue this year's work and dive deeper, or suggestions for different focus and other issues a BPF could look into.

TEAM

Task force Coordinators:

Gianluca Bontempi (co-Leader), CLAIRE Belgium (French community) NCP, Université Libre de Bruxelles, Computer Science Dept, Machine Learning Group. [Web](#)

Ricardo Chavarriaga, PhD, CLAIRE office Switzerland, Zurich University of Applied Sciences (ZHAW), Geneva Center for Security Policy (GCSP), IEEE Brain Initiative. [Web](#)

Hans De Canck, CLAIRE Office Belgium, Vrije Universiteit Brussel, AI Experience Center / AI for the Common Good initiative

Emanuela Girardi (co-Leader), Member of High-Level Expert Group on AI of the Italian Ministry of Economic Development, [AlxiA](#), [Pop AI](#)

Holger Hoos, Leiden Institute of Advanced Computer Science (LIACS), Universiteit Leiden, The Netherlands and University of British Columbia, Canada [Web](#)

Iarla Kilbane-Dawe, Parliament Hill Research Ltd, UK

Topic coordinators:

Intensive care data analysis: [Tonio Ball](#), Head of Neuromedical AI Lab Freiburg, Germany [Web](#)

Epidemiological data analysis: [Ann Nowé](#), Head of the AI Lab, Vrije Universiteit Brussel, Belgium [Web](#)

Mobility and monitoring data analysis: [Jose Sousa](#), Faculty of Medicine, Health and Life Sciences, Queen's University Belfast [Web](#)

Bioinformatics (protein and molecular data analysis): [Davide Bacciu](#), Computational Intelligence and Machine Learning Group, Università di Pisa, Italy [Web](#)

Image analysis (CT scans): [Marco Aldinucci](#), Computer Science Dept, University of Torino, Italy. [Web](#)

Social dynamics and networks monitoring: [Manlio De Domenico](#), Head of Complex Multilayer Networks Lab FBK - Fondazione Bruno Kessler, Italy [Web](#)

Robotics: [Alessandro Saffiotti](#), AASS Cognitive Robotic Systems Lab, School of Science and Technology, Orebro University, Sweden [Web](#)

Scheduling and resource management: [Marco Maratea](#), Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi. University Genova, Italy. [Web](#)