Press Release

AI and critical systems in aerospace, transport and mobility: an international collaboration between Quebec and France made official within the DEEL project

Montreal, Quebec and Toulouse - January 13, 2022 - A new step in the collaboration between the French and Quebec components of the DEEL (DEpendable and Explainable Learning) project has just been made official with the signing of an international collaboration agreement between the various project stakeholders. This agreement will further the development and amplification of the collaborations already established between these organisations.

The DEEL project is the result of a rich collaboration between academic and industrial partners. It aims to develop an artificial intelligence (AI) that is interpretable, robust, safe, and certifiable, applied to critical systems within the aerospace and transport sectors.

In Quebec, the DEEL project is led by the Consortium for Research and Innovation in Aerospace in Aerospace in Québec (CRIAQ) and Institute Intelligence and Data (IID) of Laval University, with the collaboration of the Institut de valorisation des données (IVADO).

In France, the DEEL project is supported by IRT Saint Exupéry and ANITI, the Artificial and Natural Intelligence Toulouse Institute.

The new collaboration agreement will support existing collaborations between the organisations, as well as provide a renewed framework for the mobility of expertise and knowledge - including the establishment of international student pathways.

Collaborations already in place

Already at work since 2018 (in France) and 2020 (in Quebec), the DEEL community meets monthly, virtually, during the "DEEL Carrefours" - an internal activity that provides an opportunity for cross-presentations of work, perspectives or results by the numerous research teams associated with the project.

The DEEL partners will also meet in Quebec City, from the 17th to 19th of May 2022, for the third edition of the MobiliT.AI public forum (www.mobilit.ai), a major international event that brings together a community of experts in AI applied to critical systems in the field of transport and mobility (aeronautics, automobiles, trains, space, drones, etc.).

The 2021 edition, offered entirely on a virtual platform, brought together some 350 participants from Quebec and France.

Quotes

"With the signing of this agreement, we strengthen the collaboration of forces in Quebec and France, working together to develop knowledge on the explainability of AI. This is in addition to a rich collaboration in Quebec that brings together a wide range of expertise, both academic - Laval, McGill, UdeM, UQÀM, Polytechnique Montreal - and industrial - Bell, Textro Hélicoptère, CAE, Thales, Bombardier. IID is proud to be involved in this major research initiative, the most important one set up on this key aspect of artificial intelligence. - Christian Gagné, Director of IID at Université Laval

"The strength of the DEEL project lies in the pooling of diversified Franco-Quebec expertise and skills to support collaborative industrial research in the critical aerospace sector. This agreement makes it a key international AI-powered digital aviation initiative that IVADO is very proud to be associated with." - Luc Vinet, CEO of IVADO.

"The DEEL project is now the flagship AI project for aerospace applications that will have concrete impacts both in Quebec and internationally. This major international project between France and Quebec marks the leadership of Quebec and CRIAQ on the subject, by expanding collaborations between companies and the academic research community on both sides of the Atlantic," said Alain Aubertin, President and CEO of CRIAQ.

"This international collaboration allows us to make decisive progress in the development of Artificial Intelligence for critical systems. The innovative and ambitious DEEL program model currently brings together more than a hundred researchers, PhD students and engineers working and publishing jointly on both sides of the Atlantic to participate in the intelligent mobility of tomorrow. To date, the IRT Saint Exupéry is fully committed to this Franco-Quebec collaboration which will enable us to maximise the quality and impact of the research carried out. To strengthen this beautiful collaboration, the IRT Saint Exupéry has founded a branch in Montreal in 2019, in order to be as close as possible to its Quebec partners while benefiting from a complete operational autonomy." - Magali Vaissière, President of IRT Saint Exupéry.Thanks to its international and collaborative dimension, the DEEL project has become a reference in the research landscape aiming at developing artificial intelligence suitable for critical systems. Symbolising the particular complementarity between the Toulouse and Quebec eco-systems, it is a major project to which the ANITI teams are proud to contribute. Nicolas Viallet - Chief Operating Officer for ANITI

About the organisations responsible for the DEEL project

IRT Saint Exupéry

The Technological Research Institute (IRT) Saint Exupéry* is an accelerator of science, technological research, and transfer towards the aerospace industry for the development of innovative solutions that are safe, robust, certifiable and sustainable. At our sites in Toulouse, Bordeaux, Montpellier, Sophia Antipolis and Montreal, we offer an integrated collaborative environment made up of 350 engineers, researchers, experts and doctoral students from industry and academia for research projects and R&T services supported by technology platforms in four areas: advanced manufacturing technologies, greener technologies, methods and tools for the development of complex systems and intelligent technologies.

*The IRT Saint Exupéry is a technological research institute approved by the State as part of the future investment programme (PIA).

irt-saintexupery.com

Laval University's Institute Intelligence and Data (IID)

Inaugurated in January 2020, the Intelligence and Data Institute (IID) at Université Laval brings together the driving forces of research and innovation in artificial intelligence and data development in the greater Quebec City area. From applied and fundamental research to major ethical issues, its member researchers, collaborators and associates are actively working to develop the methods, technologies and uses that will support the Quebec of tomorrow.

https://iid.ulaval.ca/en/

IVADO

IVADO was born from an initiative of the Université de Montréal, HEC Montréal and Polytechnique Montréal in 2016. With the support of its academic, industrial and institutional ecosystem, IVADO develops cutting-edge expertise in the various fields of digital intelligence (including data science, artificial intelligence and operations research) and helps transform new scientific discoveries into concrete applications, economic opportunities and benefits for society.

https://ivado.ca/en/

CRIAQ

The Consortium for Research and Innovation in Aerospace in Quebec (CRIAQ) is a non-profit organization created in 2002 with the financial support of the Government of Quebec. Its mission is to increase the competitiveness of the aerospace industry by stimulating business innovation through collaborative R&D. Its role is to bring together ecosystems and develop a new generation of innovators to strengthen Quebec's technological leadership in cutting-edge aerospace applications: digital aviation, future air mobility and sustainable aerospace.

https://www.criaq.aero/en

ANITI

The interdisciplinary Artificial Intelligence Institute of Toulouse "ANITI" (Artificial and Natural Intelligence Toulouse Institute) is one of the 4 leading institutes in artificial intelligence research in France, labelled in the framework of the PIA3. The institute is at the heart of the issues raised today by artificial intelligence technologies, such as robustness, explicability, public acceptability, ethics and understanding of their impact on the lives of our fellow citizens. Its specificity is to develop a new generation of so-called hybrid artificial intelligence, combining in an integrated way automatic learning techniques from data and models allowing to express constraints and to perform logical reasoning. ANITI, which brings together around 200 academic and industrial researchers and engineers, aims to develop an original model of close collaboration around industrial issues, to ensure the development and sustainable use of artificial intelligence-based technologies in the following strategic application sectors: mobility and transport and robotics/cobotics for the industry of the future. In addition, ANITI develops training courses in artificial intelligence, both for initial and continuing education, and contributes to economic development by drawing on the regional ecosystem. www.aniti.univ-toulouse.fr.

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