

PIA unveils 14 projects selected to adapt upper level curricula to the needs of artificial intelligence

Montréal, 26 February 2020 – The Montréal Centre for Higher Learning in Artificial Intelligence (PIA), which groups together the 12 colleges and 7 universities of the Greater Montréal area, has retained 14 of the 25 projects submitted in response to a call for concerted college/university projects aimed at developing training programs, identifying the competencies required by artificial intelligence (AI) and implementing AI-related technologies. Together, these projects will receive aggregate funding of \$1.4 million.

“The 14 projects would never have seen the light of day without support from the Ministry of Education and Higher Education under a program providing for the creation of regional centres of higher learning. Contributions by the latter make it possible to catalyse reflection and achievements with a view to enhancing and developing training in artificial intelligence,” underscores **Mylène Boisclair**, co-president of PIA and director general of Cégep du Vieux Montréal.

“The number of proposals received, but more especially the quality and diversity of proposal content, provide proof positive of the keen interest in artificial intelligence by the higher learning community and willingness by colleges and universities to cooperate in this regard,” adds **Sylvie Normandeau**, co-president of PIA and assistant vice-rector of Undergraduate Studies and Continuing Education at Université de Montréal.

With the launch of these calls for projects, PIA sought to spur innovative initiatives and foster inter-level collaboration by colleges and universities. Hence each project must be jointly presented by at least one college and one university, may include external partners as required, and be carried out over the coming two years.

“These projects will enable us to enrich the pool of AI knowledge, develop and validate new practices, and raise student awareness of this field of the future. In the longer term, these projects will help us enhance the relevance of training programs and better prepare students for the challenges posed by the development and incorporation of artificial intelligence into all sectors of society,” points up **Benoît Pagé**, director of PIA.

Projects selected – Training in artificial intelligence

How virtual assistants and applications powered by artificial intelligence can help promote student academic success. Comprising members from Dawson College, Concordia University and McGill University, the team will examine the AI functions of various devices and develop tools designed to help students with disabilities and their instructors use these tools effectively.

Development of a higher learning program in cognitive sciences. Submitted by Collège de Maisonneuve, Université de Montréal and UQAM and partner Concertation Montréal, the development of a double Diploma of College Studies (DCS) combining Computer Science and Mathematics with Social Science aims to inspire female students to undertake studies in programming or artificial intelligence.

Setup of a permanent summer school in artificial intelligence and cognitive sciences. An initiative of UQAM and Cégep André-Laurendeau, with support from IVADO, Google AI, ISC-UQAM and CRIA-UQAM, the object of this summer school program is to introduce college students and university undergraduates to artificial intelligence and to open the door to university-level training in the field.

Development of arts and technology courses for the age of artificial intelligence. Université de Montréal and Cégep Marie-Victorin propose developing two courses to introduce arts students to AI-related fields such as smart projection, virtual reality, data visualization and art generation using AI.

Introduction to AI data management. Collège de Bois-de-Boulogne and Université de Montréal, in cooperation with JACOB and IVADO, seek to develop a hybrid online and laboratory-based program in Data Sciences.

Integration of artificial intelligence into the teaching of the prototyping of instruments of measure. An initiative of Cégep André-Laurendeau, École de technologie supérieure and partner OPTÉCH, this project endeavours to employ applied research to expand the pool of AI knowledge and provide for knowledge transfer to upper level programs of study.

Ethics and artificial intelligence in higher learning. This project by Collège de Rosemont and Université de Montréal draws inspiration from the deliberative and inclusive process which led to the Montréal Declaration, and aims to tool students and faculty for the challenges posed by AI.

Employ cross-disciplinarity to identify the ethical and social challenges of AI. The project co-led by Cégep de Saint-Laurent and Université de Montréal, in cooperation with ARTENSO, seeks to provide for the development of a complementary college-level or optional university-level course in AI and related ethical and social challenges.

Projects selected - Competency framework projects in AI

AI in healthcare: A Québec framework for nursing education. Submitted by John Abbott College and McGill University, this framework seeks to help nurses provide better patient care through the use of complex, ever evolving developments in artificial intelligence.

Competency framework in artificial intelligence management as applied to Industry 4.0. Tendered by Collège de Bois-de-Boulogne and Polytechnique Montréal, in cooperation with TÉLUQ, Collège d'Alma and JACOB, this project will focus in particular on AI content integration, AI management and AI-related workplace organization.

Competency framework in artificial intelligence: A success pipeline from college to university and beyond. This project by Dawson College and Concordia University seeks to develop a comprehensive competency framework in AI with a view to creating a pipeline of success across college, university and continuing education programs of study.

Continuum, a qualifying program in bioinformatics. This project by Collège Ahuntsic and Université de Montréal, in cooperation with Montréal InVivo, Qualifications Québec and Pharmabio Développement, seeks to address the needs of businesses active in the bioinformatics sector and develop appropriate training by identifying the competencies essential to employment in this field.

Development of an adaptive, bilingual competency framework in AI through machine learning. This competency framework by Vanier College, HEC Montréal and McGill University and partner Google Brain, will use machine learning algorithms to analyse job postings by AI sector companies in Montréal and programs of study offered by local educational institutions.

Upper level teaching of the ethics of artificial intelligence in light of the ubiquitous creep of information and communications technologies (ICTs). Cégep André-Laurendeau and UQAM, with support from Vitrine Technologie Éducation and Réseau des répondants et répondantes TIC, will produce a competency framework combining reflection into ethics and media studies of ICTs for use in the upper level teaching of the ethics of AI.

To view summaries of the six competency framework projects retained, please click [here](#).

About PIA

A joint initiative of 12 Montréal colleges and 7 universities, the Montréal Centre for Higher Learning in Artificial Intelligence (PIA) seeks to provide a concerted response to the challenges posed by developments in artificial intelligence. PIA similarly aims to group together and grow a likeminded community of individuals interested in and committed to the challenges associated with artificial intelligence, and to equip them with the requisite tools. [www.poleia.quebec]

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