

CMNDS Alfor Good Lab

Presents

Global Mapping of Artificial Intelligence Centers

October 2018

A Message from Our Founder

Dear Reader,

The Fourth Industrial Revolution (4IR) is changing the way that humans work, live, and coexist with each other. At C Minds, we believe that it should be an inclusive movement with a positive widespread impact. We acknowledge the advent and many uses of Artificial Intelligence (AI) as an ongoing outcome of the 4IR and, as such, we are currently collaborating with a variety of stakeholders to implement a national AI strategy and framework to ensure that Mexico is at the forefront of the AI movement. In April 2018, we co-published <u>Towards an AI</u> <u>Strategy in Mexico: Harnessing the AI Revolution</u>, evaluating the technology's potential and offering recommendations for future implementation by different sectors.

As an impact innovation agency that aims to harness the power of disruptive technology, C Minds views knowledge exchange as a key component to ensure the effective research, development, and implementation of significant strategies and projects. It is with that perspective that we approached this report. C Minds is is pushing the boundaries of AI conversations and policies in emerging economies while observing and learning from the international landscape. We believe that it is valuable to give a non-exhaustive overview of nascent AI policies and the work being done by global AI-related institutions to not only continue the discussion within Mexico and other developing countries, but to also insert ourselves and others in an international dialogue that addresses the breakthroughs, advantages, and risks of machine intelligence.

We hope that you will join us in this conversation as we continue to update this report and add additional AI-related institutions. If you would like to have your institution included in our map, please <u>fill in this form</u>.



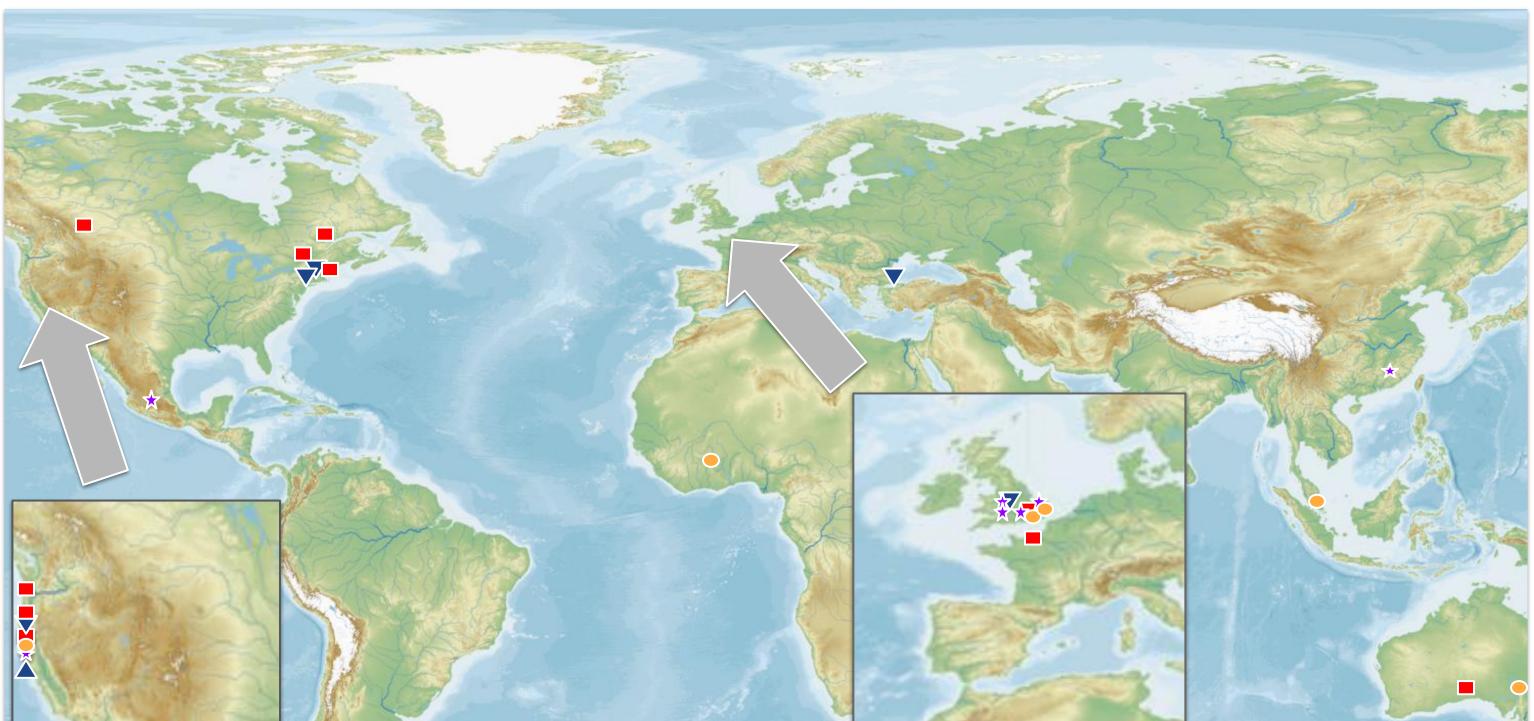
Constanza Gomez-Mont Founder & CEO C Minds

Summary

Canada5Mexico5United States6Ghana9Hong Kong10

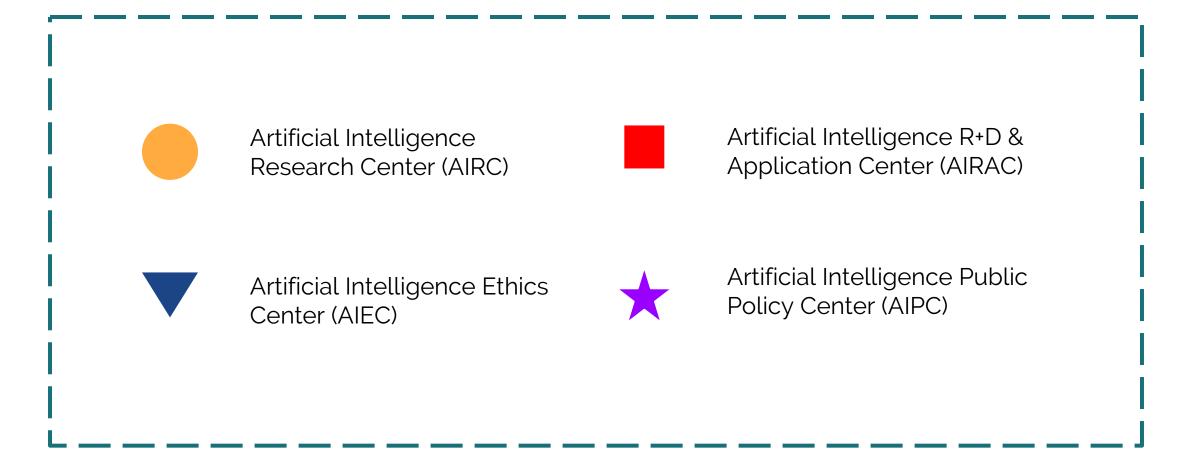
Singapore	10
France	11
United Kingdom	11
Australia	14

Map of Al Related Institutions





AI CENTER MAP LEGEND



*Please note some centers might fall under various categories - this has not been represented on the map.

Canada

Canada has been a frontrunner in the race to implement an AI strategy, being the first country to announce one. Its Pan-Canadian Artificial Intelligence Strategy details a five year plan to address AI research and talent.

Alberta Machine Intelligence Institute (AIRAC)

Edmonton, Alberta - www.amii.ca

Main activities: AI R&D + Application

The Alberta Machine Intelligence Institute is a research institution that looks to encourage understanding and innovation in various subfields of machine intelligence. As a part of the Pan-Canadian AI Strategy, the team also works with local and international businesses to create innovative, adaptive solutions to the toughest problems facing Alberta and the world.

Montreal Institute for Learning Algorithms (McGill University) (AIRAC)

Montreal, Quebec - mila.quebec/en/mila

Main activities: AI R&D + Application

MILA researchers focus on the areas of deep learning and machine learning for AI. The Institute has applied deep learning to the fields of vision, speech, and language, while also providing a unique access to the state-of-the-art to a pool of companies which can benefit from the opportunities opened up by machine learning.

Vector Institute for Artificial Intelligence (AIRAC)

Toronto, Ontario - www.vectorinstitute.ai

Main activities: AI R&D + Application

The Torontonian institute seeks to drive excellence and leadership in Canada's knowledge, creation, and use of artificial intelligence (AI) to foster economic growth and improve the lives of Canadians.

Mexico

Mexico is one of the first 10 countries to implement an AI strategy. In March 2018, the government announced they would be using the recommendations from *"Towards an AI Strategy in Mexico: Harnessing the AI Revolution"*, a report authored by C Minds and Oxford Insights and commissioned by the UK Prosperity Fund in June 2018, as input for the national AI strategy.

C Minds AI for Good Lab (AIPC, AIEC, AIRAC)

Mexico City, Mexico - www.cminds.co/ai

Main activities: public policy, pilot projects and education with a focus on ethics

C Minds is an impact innovation agency that works to democratize the Fourth Industrial Revolution: the AI for Good Lab looks to strengthen Mexico in the face of the international AI Revolution and ensure the benefits and impact of this technology are spread equally across the country. The Lab has developed several complementary initiatives where academia, industry, civil society and federal and local governments collaborate.

Other locations: San Francisco

United States

The Obama Administration planted the seed for a national AI strategy with the publication of 3 reports: *Preparing for the Future of Artificial Intelligence; National Artificial Intelligence Research and Development Strategic Plan*; and *Artificial Intelligence, Automation, and the Economy*. The current administration has announced the creation of a Select Committee on Artificial Intelligence to prioritize research and development, along with a Joint Artificial Intelligence Center that has a focus on AI as a defense tool.

AI Ethics Lab (AIEC)

Boston, Massachusetts - www.aiethicslab.com

Main activities: research & education

The AI Ethics Lab's mission is to bring together researchers and practitioners from various disciplines to detect and solve issues related to ethical design in AI. The lab provides ethics guidance to researchers, developers, and legislators through workshops, talks, and working groups.

Other locations: Istanbul, Turkey

AI Now Institute (New York University) (AIEC)

New York, New York - www.ainowinstitute.org

Main activities: research



The AI Now Institute at New York University (NYU) was founded in 2017 by Kate Crawford and Meredith Whittaker. The institute conducts interdisciplinary research on the social implications of AI; with a focus on rights and liberties, labor and automation, bias and inclusion, and safety and critical infrastructure.

Allen Institute for Artificial Intelligence (AIRAC)

Seattle, Washington - www.allenai.org

Main activities: AI R&D + Application

A12 focuses on conducting high-impact research and engineering in the field of artificial intelligence, all for the common good. AI2 is the creation of Paul Allen, Microsoft co-founder, and is led by Dr. Oren Etzioni, a world-renowned researcher and professor in the field of AI and computer science.

Artificial Intelligence Center, part of SRI International (AIRAC)

Menlo Park, California - www.sri.com/about/organization/information-computing-sciences/aic

Main activities: R&D + Application

SRI's Artificial Intelligence Center researches the computational principles underlying intelligence in man and machines. It develops methods for building computer-based systems to learn, perceive and interact with the world, reason, and make decisions.

United States (C'd)

C Minds AI for Good Lab (AIPC, AIEC, AIRAC)

San Francisco, California - www.cminds.co/ai

Main activities: public policy, pilot projects and education

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Other locations: Mexico City

Future of Life Institute (AIEC, AIRC)

Boston, Massachusetts - www.futureoflife.org

Main activities: research

Future of Life focuses on keeping artificial intelligence beneficial and explores ways of reducing risks from nuclear weapons and biotechnology. The institute's mission is to support research and initiatives for safeguarding life and developing optimistic visions of the future, including positive ways for humanity to steer its own course considering new technologies and challenges.



Machine Intelligence Research Institute (AIRC)

Berkeley, California - intelligence.org

Main activities: research

The Machine Intelligence Research Institute is a research nonprofit studying the mathematical underpinnings of intelligent behavior. Its mission is to develop formal tools for the clean design and analysis of general-purpose AI systems, with the intent of making such systems safer and more reliable when they are developed.

Markkulu Center for Applied Ethics (Santa Clara University) (AIEC)

Santa Clara, California - www.scu.edu/ethics/about-the-center

Main activities: research

The Markkulu Center has a vision of being one of the major ethics educators on a global scale. Beyond a full range of events, grants, and fellowships for the Santa Clara University Community, the Center also serves professionals in fields from business to health care, from government to the social sector, providing innovative approaches to problems from fake news to privacy protection.

AIRC/ AI Research Center

United States (C'd)

MIT Media Lab (Massachusetts Institute of Technology) (AIRAC)

Cambridge,

Massachusetts

www.media.mit.edu

Main activities: AI R&D + Application

The MIT Media Lab is an antidisciplinary research community that addresses the technology related concerns and connects technology back to the social and the human. Current lab research examines the deeper implications of where technology creation and adoption has led us—and where we want to go next. The Lab has also created technologies such as wearable computing, tangible interfaces, and affective computing.

Partnership on AI (AIRC)

San Francisco, California - www.partnershiponai.org

Main activities: research

The Partnership on AI conducts research, organizes discussions, shares insights, provides thought leadership, consults with relevant third parties, responds to questions from the public and media, and creates educational material that advances the understanding of AI technologies including machine perception, learning, and automated reasoning. It was established to study and formulate best practices on AI technologies and serve as an open platform for discussion and engagement about AI and its influences on people and society.



Africa

Ghana

In June 2018, Google announced that it will open an AI research center in Ghana. Inspired by events such as Data Science Africa and Deep Learning Indaba, the company looks to continue participating in Africa's innovation initiatives through this new center.

Google AI (AIRC, AIPC)

Accra, Ghana - Opening in 2018

Main activities: research

The recently announced Google AI Center will bring together top machine learning researchers and engineers. The center's mission is to collaborate with local universities and research centers, as well as work with policy makers on AI's potential use cases in Africa.



Asia

Hong Kong

Hong Kong announced an AI Lab that will collaborate with the Hong Kong Science and Technology Parks Corporation (HKSTP). The AI Lab and HKSTP will begin a six month program to help develop AI start-ups. In addition, the government has set aside a budget of \$HK 50 million that will go towards assisting HKSTP's projects and opening two technology-related research centers.

Big Data Institute (The Hong Kong University of Science and Technology) (AIPC, AIRC)

Hong Kong - www.bdi.ust.hk

Main activities: research

The Big Data Institute conducts interdisciplinary research that will have a long-term impact on Hong Kong and China's Big Data applications. The Institute also develops technologies, policies, and educational programs while focusing on developing a Big Data platform to transfer technology developed for Big Data extraction, integration, management, mining and visualization to product application.

Singapore

In March 2017, the Singapore Government invested S\$150 million in AI Singapore, a five year program to



expand AI in the country with a focus on four initiatives: Fundamental AI Research, Grand Challenges, 100 Experiments, and AI Apprenticeship. June 2018 saw the creation of the Advisory Council on the Ethical Use of AI and Data.

Data Science & Artificial Intelligence Research Centre (Nanyang Technological University) (AIRC)

Singapore - www.dsair.ntu.edu.sg/Pages/Home.aspx

Main activities: research

The Data Science & Artificial Intelligence Research Centre's vision is to become a leader in AI and data science research and innovations. The centre has a four-pronged mission: to educate future data and AI scientists, develop cutting-edge technologies in the AI field, convert research into commercial impact, and support Smart Nation (a national effort by Singaporeans to promote better living through technology).

Europe

France

France aims to become a key player in the AI field, having recently announced a National Artificial Intelligence Programme and plan to develop an open data policy. Current President Emmanuel Macron plans to invest €1.5 billion within the next five years to bring this plan to fruition. His current focus is to explore the potential of AI in the healthcare and transportation industries.

Lens Computer Science Research Lab (AIRAC)

Lens, France - www.cril.univ-artois.fr/en

Main activities: AI R&D + Application

The Lens Computer Science Research Lab is a joint laboratory between the Université d'Artois and the National Center for Scientific Research (CNRS). The Lab is made up of over 50 members from various academic backgrounds including researchers, students, lecturers, and administrative/technical staff who focus on the areas of knowledge representation and reasonings and algorithms for inference and constraints.

United Kingdom

The UK House of Lords' Select Committee on Artificial Intelligence published "AI in the UK: ready, willing, and



able", a report that offered recommendations to the British government and gave an overview of the social and economic impacts of AI. Shortly thereafter, in April 2018, the government released the AI Sector Deal, a comprehensive strategy that addresses policy initiatives, research and development, and the ethics of AI. In June 2018, the Select Committee on Artificial Intelligence received an official response from the government, commenting on each report recommendation. In addition to commenting on the recommendations, the Government recognized the importance of AI for the UK's economy, stating that AI is "key to realising the ambitions of the Industrial Strategy and ensuring the UK is at the forefront of existing and future industries."

The Alan Turing Institute (AIRC)

London, United Kingdom - www.turing.ac.uk

Main activities: research

The Alan Turing Institute is a leading national institute for data science and artificial intelligence research. The Institute's mission is to educate the next AI leaders, mold the public conversation, and push the boundaries of science for the public good.

Article 36 (AIEC)

United Kingdom - www.article36.org

Main activities: research

Article 36 is a non-profit organization that does research, policy and advocacy, and fosters civil society partnerships to respond to harm caused by existing weapons and to build a stronger framework to prevent harm as weapons are used or developed in the future.

The Bennet Institute for Public Policy (University of Cambridge) (AIPC)

Cambridge, United Kingdom - www.bennettinstitute.cam.ac.uk

Main activities: research

The Bennett Institute for Public Policy explores the link between public policy, innovation, and technology. The institute's research projects focus on the impact that technological change is having on the nature of work, community, and consumption around the world.

Europe

United Kingdom (C'd)

DeepMind (AIRAC)

London, United Kingdom - www.deepmind.com

Main activities: AI R&D + Application

DeepMind is a global leader in AI research and applying positive AI use cases. Its mission is to push the boundaries of AI by developing problem-solving programs. It was acquired by Google in 2014, making it a part of the Alphabet group.

Other locations: Edmonton and Montreal, Canada and Mountain View, CA

Digital Catapult (AIRAC)

London, United Kingdom - www.digicatapult.org.uk

Main activities: AI R&D+Application

Digital Catapult is a leading advanced technology innovation centre that collaborates with businesses to drive early adoption of AI and data science technologies and to help grow the UK economy. It is part of the wider Catapult network.



Digital Ethics Lab (Oxford Internet Institute) (AIEC)

Oxford, United Kingdom - www.oii.ox.ac.uk/research/digital-ethics-lab

Main activities: research

The Digital Ethics Lab, established by the Oxford Internet Institute, undertakes research on the ethical challenges brought about by digital innovations. The lab seeks to identify the benefits and enhance the positive opportunities of digital innovation as a force for good and avoid or mitigate its risks and shortcomings.

The Institute for Policy Research (University of Bath) (AIPC)

Bath, United Kingdom - www.bath.ac.uk/collections/institute-for-policy-research

Main activities: research

The Institute for Policy Research produces research and publications to influence public policy debates and decision-making.

The Institute for Public Policy Research (AIPC)

London, United Kingdom - www.ippr.org

Main activities: research

The Institute for Public Policy Research is a progressive think tank that explores the link between public policy, innovation, and technology. As a registered charitable organization, its mission includes, but is not limited to, promoting research and educating the public in the economic, social and political sciences, science and technology, voluntary, social enterprise, public services, and industry and commerce sectors.

Europe

United Kingdom (C'd)

Leverhulme Centre for the Future of Intelligence (AIRC, AIPC)

Cambridge, United Kingdom - www.lcfi.ac.uk

Main activities: research

The Leverhulme Centre for the Future of Intelligence is an interdisciplinary community of researchers that explore the short and long term opportunities and challenges of technology such as AI. The centre has links to technologists and the public policy world and plans to work as a community to ensure that we make the best of the opportunities of artificial intelligence as it develops over coming decades.

Oxford Insights (AIPC)

Oxford, United Kingdom - www.oxfordinsights.com

Main activities: AI R&D and public policy

Oxford Insights advises various organizations on strategic, cultural and leadership opportunities from digital transformation and artificial intelligence. It helps businesses and organizations co-design projects and design solutions for national strategies, pilot programs, media events, or startup accelerators.



Oceania

Australia

The Australian government will invest approximately AU\$30 million in the AI sector over the 2018-2022 period as part of its plan to ensure the development of an AI strategy. The government also plans to approach ethics through its upcoming AI Ethics Standard, while also implementing a Standards Framework and a Technology Roadmap. Additionally, the government will detail its AI blueprint in a report to be released in late 2018.

Australian Institute for Machine Learning (University of Adelaide) (AIRAC)

Adelaide, Australia - www.adelaide.edu.au/aiml

Main activities: AI R&D+ Application

The Australian Institute for Machine Learning aims to ensure that South Australia will benefit from the Fourth Industrial Revolution. Housed at the University of Adelaide, and in collaboration with the State Government of South Australia, the institute works to construct new AI-enabled defense capabilities and support the development and adoption of AI- based products and initiatives.

Centre for Artificial Intelligence (University of Technology Sydney) (AIRC)

Sydney, Australia - www.uts.edu.au/research-and-teaching/our-research/centre-artificial-intelligence

Main activities: research

The Centre for Artificial Intelligence focuses on research to develop theoretical foundations and advanced algorithms and to spark significant progress in related areas like computational intelligence, business



intelligence, computer vision, data science, machine learning, brain computer interface, social robotics and information systems.

About Us

Unleashing the power of technology for social and economic impact

C Minds is an **impact innovation agency** that designs strategies for economic and social development by enabling cross-sector collaborations and by harnessing the power of disruptive technology.

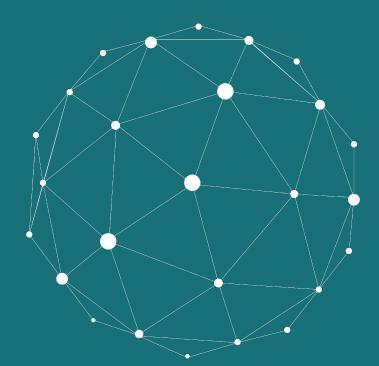
Our 'AI for Good Lab' looks to strengthen Mexico and other emerging economies in the face of the international AI

Revolution and democratize the benefits and impact of this technology. It is based on a philosophy of systemic change and has four strategic initiatives that complement each other and in which academia, industry, civil society and federal and local governments can collaborate.

www.cminds.co/ai

Let's get in touch!

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C MINDS

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