



AMII FACT SHEET

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The Alberta Machine Intelligence Institute (Amii)

- Founded in 2002 as the Alberta Ingenuity Centre for Machine Learning (AICML)
- One of Canada's three AI centres of excellence established through the Pan-Canadian AI Strategy (<https://www.cifar.ca/ai/pan-canadian-artificial-intelligence-strategy>)
- Over 200 technologies created since inception (including algorithms, architectures, theories, methodologies, approaches and applications)
- World-leading academic research group in the AI subfield of reinforcement learning and home to Dr. Richard Sutton, the field's pioneer
- Over 100 staff, students & researchers
 - 14 primary researchers
 - Over 25 staff members & research associates
 - 75 MSc & PhD candidates and post-doctoral fellows
- Instrumental in helping the University of Alberta develop into one of the world's top five academic institutions for AI and machine learning research¹ and Canada's leading institution for AI and machine learning research²
- Since inception, garnered over \$200 million in cash, in-kind and grant funding
 - \$28.5 million invested by the Government of Canada over the next five years
 - \$45 million invested by the Government of Alberta over the past 16 years
- Over \$150 million in Venture Capital funding raised by Amii alumni
- Enabled an estimated \$25 million in outside investment in new jobs and economic impact within Alberta since 2016

Active Research Projects (select)

- Information extraction and visualization tools for medical and [legal domains](#)
- [Ana - Automated Nanny Agent](#)
- [Adaptive Prosthetics Program](#)
- [Patient-specific survival prediction, psychiatric diagnosis and treatment](#)
- [Advanced analytics for the sport of curling](#)
- [Atari 2600 game learning for general competency of AI](#)

¹ <http://csrankings.org/#/fromyear/2008/toyear/2018/index?ai&mlmining&world>

² <http://csrankings.org/#/fromyear/2008/toyear/2018/index?ai&mlmining&canada>



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Notable Past Research

- **UCT Algorithm (2006)** – Foundational machine learning algorithm at the heart of many recent advancements in games research
- **Chinook (2007)** – Checkers solved by the first computer program to win the world champion title in checkers in a competition against humans
- **Arcade Learning Environment (2013)** – Software platform for evaluating the general competence of AI algorithms
- **Cepheus (2015)** – First AI to solve the game of Heads-Up Limit Texas Hold'em
- **BLINCDev (2016)** – Open-source community centred around robotic technologies developed at UAlberta
- **DeepStack (2017)** – First AI to beat human professionals at Heads-Up No-Limit Texas Hold'em

Alberta Innovation Affiliates & Associated Corporate Labs

- Borealis AI (formerly RBC Research)
- DeepMind (owned by Alphabet, Google's parent company)
- Mitsubishi Electric
- ATB Financial
- Servus Credit Union
- Willowglen Systems
- NetEngery
- Shell Scotford

Amii Educational Events & Seminars

- **Amii's AI Meetup** – Brings together students, researchers and business-leaders in Edmonton's AI community
- **Machine Learning 101** – Business-focused, one-hour intro to artificial intelligence and machine learning
- **Demystifying AI Seminar** – Full-day seminar hosted through the Faculty of Extension to give practical, actionable steps for thinking about and incorporating AI into business
- **Hello, Amii!** – Presentation and Q&A session for potential industry partners to learn about Amii and how we work to build the AI capabilities of Alberta-based businesses