



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
- Around 150 staff, students & researchers
 - 20 primary researchers (including 3 Canada CIFAR AI Chairs)
 - Over 25 staff members & research associates
 - Over 100 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 \$150 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
- Conducted 20 reskilling/upskilling training sessions with over 500 participants (since Jan 2019)
- Hosted over 100 machine intelligence literacy and community engagement events with over 4,400 attendees (since July 2019)

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 championship 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
- **BLINCDDev (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

Current Amii Innovation Affiliates

- 2S Water
- ARC Resources
- Cognitive Diagnosis
- Dot Technology Corp.
- Drugbank
- EHS Analytics
- FORCORP Solutions
- Frettable
- Hoot Research
- Imperial Oil Limited
- Integral Engineering
- Medo.AI
- Mikata Health Inc.
- Net Energy Exchange (NE2)
- OKAKI
- SAM
- Synauta Inc.
- Testfire Labs
- Willowglen Systems Inc.

Amii Educational Events & Courses

- **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
- **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
- **Coursera MOOCs** – [Machine Learning: Algorithms in the Real World Specialization](#) teaches individuals how to master techniques for implementing a machine learning project; [Reinforcement Learning Specialization](#) teaches individuals how to implement a complete reinforcement learning solution and apply AI tools to solve real-world problems
- **UAlberta Faculty of Extension Courses** – The [Machine Learning for Managers Series](#) provides managers and domain experts with the knowledge, skills, and competencies needed to understand the role of AI and ML in business, and how to manage ML projects