

The places youth could go

Opportunities in Alberta's diversified economy

Artificial Intelligence (AI) & High Tech

SNAPSHOT

3,083
technology companies are now headquartered in Alberta

149%
increase since 2018

- 80% in industry have a Master's & over 40% PhDs
- 6,478 new tech degree grads needed in Edmonton area today

FUTURE OUTLOOK

The Government of Alberta's Technology & Innovation Strategy sector goals for 2030 include:

- 20,000 new jobs
- \$5 billion more in annual revenue

Research and commercialization priorities are:

- Energy, minerals and clean-tech
- Agriculture
- Health and disease prevention
- Emerging technologies

IN-DEMAND JOBS/EDUCATION

- PhD level software and web developers or architects
- MBA level business experts
- Undergrad/MSc level developers specialized in AI/Machine learning systems

LOCAL EXAMPLES

Edmonton's [Alberta Machine Intelligence Institute \(Amii\)](#) is one of three centres partnered on the Pan-Canadian AI strategy

Robotics supply chain company [Attabotics](#) is based out of Calgary and provides warehouse solutions

Data analytics company [Hölmetrics](#) uses machine learning and AI to measure organizational wellness



Healthcare

SNAPSHOT

- The pandemic caused a backlog of people seeking healthcare education and students waiting for practicums
- Alberta and other provinces are adding seats

FUTURE OUTLOOK

Retirements of health care workers and health needs of an aging population will increase demand for health care workers

IN-DEMAND JOBS/EDUCATION

By 2028 Alberta needs an additional:

- 3,162 licensed practical nurses
- 2,885 registered nurses and registered psychiatric nurses
- 1,762 medical laboratory technicians and pathologists' assistants
- 1,214 medical administrative assistants

9,644
additional nurses aides AND other support staff by 2028

LOCAL EXAMPLES

Edmonton-based [Alberta Diabetes Institute](#) is Canada's largest standalone diabetes research facility

[Health Technology Commercialization Hub](#) is a Calgary-based health technology accelerator

[Alberta Health Services \(AHS\)](#) is the largest integrated provincial health care system in the country

Life Sciences

SNAPSHOT

25%
of companies started in last 2 years

59.1%
of companies started last 6 years

60%
of Alberta's life science companies are in metro Edmonton

110
life science companies in Calgary

FUTURE OUTLOOK

- By 2029 BC/AB staff shortages in manufacturing, logistics, marketing and management
- Business and sales development hardest to fill in Alberta so not just science degrees needed

IN-DEMAND JOBS/EDUCATION

32.6% Bachelor's
23.7% Master's
25% PhD's

↑↑↑ Demand for advanced degrees going up

LOCAL EXAMPLES

[Li Ka Shing Institute of Virology](#) and the [Applied Virology Institute](#) in Edmonton

University of Calgary's [Life Sciences Innovation Hub](#) provides space for researchers to build life-sciences companies and get products to market

[Allos BioScience](#) in Lethbridge builds custom research and diagnostic biosensors

Live & Play in Alberta

In 2022, Edmonton and Calgary ranked in the **top 10 most affordable cities in the world**

Edmonton and Calgary both made the **top 100 world's best cities to live and visit**

Alberta has **6 UNESCO World Heritage Sites**, the most of any province

Edmonton is home to the **largest connected urban parkland** in North America while Calgary has the **most sunny days** in the country

[Banff National Park](#) is Canada's oldest national park while [Jasper National Park](#) is the country's largest

Food & Agriculture

SNAPSHOT

- 57,195 Alberta farm operators in 2021
- 37.9% of farm operators in Alberta are under the age of 54. 8.34% under the age of 35
- 29,601 paid farm employees in Alberta in 2021, 66.03% are not family members:
 - 53.04% full-time
 - 17.79% part-time
 - 29.16% seasonal/temporary

FUTURE OUTLOOK

- 2 in 5 workers (42%) lost to retirement
- 1 in 3 agriculture jobs unfilled in Alberta by 2029
- 5,600 jobs unfilled in beef industry
- 2,500 jobs unfilled in grain and oilseed
- 2,800 jobs unfilled in greenhouse, nursery and floriculture

IN-DEMAND JOBS/EDUCATION

- Managers, particularly owner/operators and hired operators
- General farm workers
- Technology workers with sector specific expertise

LOCAL EXAMPLES

[Agri-Value Processing Business Incubator \(APBI\)](#) in Leduc supports start up and scale up of agri-food business

[GoodLeaf Farms](#) commercial vertical farm warehouse in Calgary

[More Than Protein](#) Ingredients Ltd. (MTP) plant-processing facility to convert legumes into plant-based protein power

\$9.68B
contribution to Alberta GDP in 2020

Energy

SNAPSHOT

- Cleaner and greener energy, oil and gas or renewables

FUTURE OUTLOOK

- Leadership and human soft skills less automated
- Technical, field operations more automated which will change the types of jobs and competencies needed
- The Canadian Energy Regulator estimates Alberta will lead the country in renewable energy adoption, primarily through wind and solar, by 2023

IN-DEMAND JOBS/EDUCATION

- The clean-tech sector will need workers with specialized skills like engineers and business experts like accountants
- Digitalization will require technology workers, like data scientists, with sector-specific expertise
- Those who have worked in traditional oil and gas can upskill and reskill to certain clean-tech sub sectors and jobs

LOCAL EXAMPLE

Edmonton Region [Hydrogen HUB](#) projects focused on production, transportation and end use of hydrogen

Calgary-based [Eavor Technologies Ltd.](#) has developed the Eavor-Loop for geothermal energy

Alberta-based [Energy Futures Lab](#) works to build the province's future sustainable and equitable energy system

170,000
new clean tech jobs – demand will vary by subsector

Carbon capture, utilization and storage subsector will face a greater labour shortage than other subsectors by 2030



Film, TV & Interactive Digital Media

POSSIBLE JOBS

Film and TV production jobs include pre-production and production jobs like film crew, cast, and sets and post-production jobs like sound and graphics and visual effects

Interactive Digital Media jobs include technical roles such as game developers and software engineers to arts roles such as digital media designers and animators

LOCAL EXAMPLES

[BioWare Edmonton](#) has produced video games since 1996 including *Mass Effect* and *Dragon Age*

[F&D Scene Changes](#) in Calgary provide fabrication services for film and tv sets, museums, theaters and others

[Simulacrum Interactive](#) in Lethbridge uses interactive digital media and virtual reality technology for game development and business applications

SNAPSHOT

- 1,300 Albertans employed at video game studios in 2021
- 4 ACTRA*-staffed film & tv projects wrapped in 2022
- 7 ACTRA*-staffed film and tv projects in production in 2022

FUTURE OUTLOOK

- 4,000 additional film & tv crew positions by 2030 as the sector grows and retirements occur
- The Alberta government announced a \$225 million total film and tv tax credit from 2022-2025
- Policy direction may influence the growth trajectory of the digital media sector
- Edmonton's strong AI and growing eSports communities could see new opportunities for collaboration

88
Alberta-based video game studios in 2021

*Alliance of Canadian Cinema, Television & Radio Artists

