

# **Artificial Intelligence**Building the Future Today



## B.C. is a Hub of Al Enterprise and Research

British Columbia (B.C.) is a national leader in applied and commercialized AI, offering solutions in software and hardware development, research and support services. B.C. is home to Canada's Digital Technology Supercluster, which fosters innovation and collaboration among tech companies with the support of federal funding. It also hosts the Quantum Algorithms Institute, boasting highly educated talent and top research universities. In this vibrant tech ecosystem, major global players such as Alphabet's SandboxAQ, Amazon Web Services, Avigilon, Change Healthcare, Cisco, FLIR, Fujitsu, Grammarly, Mastercard, Microsoft, 1QBit, Samsung, Tableau, Wayve Technologies, the Weir Group and more have built their AI capabilities here in B.C.







## Companies in British Columbia have diverse capabilities, including:

- Machine learning
- Deep learning
- Natural language processing and generation
- Computer vision
- Robotics
- Artificial general intelligence
- Quantum computing



#### **Innovation Ecosystem**

British Columbia hosts a thriving tech ecosystem where both small start-ups and multinational tech giants benefit from a culture of pioneering innovation, backed by energetic talent and industry-leading research. Vancouver is home to DIGITAL, a supercluster, and is consistently ranked as one of the world's most tech-friendly cities, including recognition in 2023 as the number one city for high-tech job growth in Canada and 15th globally.

B.C.'s start-up culture is supported by prominent accelerators and incubators such as Creative Destruction Lab, VIATEC, entrepreneurship@UBC, Accelerate Okanagan and SFU VentureLabs. Programs such as the BC Innovator Skills Initiative (ISI), Mitacs grants, Student Work Placement Program and B.C. Employer Training Grant (ETG) help to train and hire talent. Additionally, the Small Business Venture Capital Tax Credit encourages investment in early-stage small businesses. B.C. offers lower operating costs than other innovation hubs, with a competitive corporate income tax rate, the lowest provincial personal income taxes in Canada for individuals earning up to \$125,000.

#### **Quality of Life**

B.C. is one of the world's most multicultural, safe and dynamic places to live. The province has vibrant cities, some of the world's best universities, free universal health care and unparalleled opportunities for outdoor recreation. Mercer's 2023 Quality of Living Ranking rated Vancouver as the top city in North America and number eight in the world. The Economist Intelligence Unit's Global Liveability Index for 2024 ranked Vancouver eighth out of 173 cities.



#### **A Prime Location**

Companies in British Columbia are in the same time zone as those in Washington State and California, giving them a competitive advantage when collaborating with partners and colleagues to the south. B.C. is also ideally positioned for conducting business with colleagues in both Asia and Europe on the same business day.

#### **Exceptional Talent**

British Columbia's universities are consistently ranked among the leading post-secondary institutions in Canada. The University of British Columbia (UBC) has over 2,750 undergraduate students, and Simon Fraser University (SFU) has over 3,000 undergraduate students enrolled in computer science programs, and 200 graduate students pursuing advanced research and applications in data science, visual computing and other Al-related fields. There are also nearly 1,000 researchers working in computer science at the two universities

B.C.'s progressive immigration policy helps B.C. businesses recruit the best global talent and retain international talent in tech occupations. BC Provincial Nominee Program (BC PNP) has supported more than 6,000 tech workers to be nominated for permanent residence since its launch in May 2017. Graduates from top-ranked universities, highly specialized workers and the ability to bring in new employees makes B.C. a talent magnet.



With a dynamic ecosystem of almost 300 start-ups and established players, **B.C.'s Al industry has** garnered global attention and investment.

## **Industry Profile**

British Columbia's thriving Al industry has more than 300 companies transforming traditional industries across a range of sectors. B.C. Al specialties and applications span organizations within their own operations and extends across various other sectors including software, robotics, life sciences, medical, computer vision, cybersecurity, fintech, agritech and more.

#### Research

B.C. possesses top organizations and institutions carrying out research related to artificial intelligence and machine learning (Al/ML), natural language processing and generation, computer vision and robotics and quantum computing.

#### **Software and/or Platform Development**

B.C. companies design, develop, publish and maintain AI/ML software and platforms for both commercial use as well as customized solutions for specific uses. These solutions include business optimization and customer experience management, and they address specific industry needs including scientific and medical advancements and security systems.

#### **Hardware Development**

B.C. is home to leading companies that design, develop and integrate Al/ML related software into physical products, such as sensors, microchips, robots, as well as unmanned underwater and aerial vehicles.

#### **Support Services**

As a hub of AI expertise, B.C. companies also provide technical and professional services to other organizations to introduce, improve and/or enhance AI/ML capabilities. This includes companies and organizations that support the establishment and growth of AI/ML businesses through mentorship and investments.









## **World-Class Innovation and Research Centres**

#### **Professional Associations in B.C.**

| INSTITUTION | AREAS OF FOCUS |
|-------------|----------------|
|             |                |

| INSTITUTION   | ANEAS OF FOCUS   |
|---|--|
| The Artificial Intelligence<br>Network of British<br>Columbia (AInBC) | Cross-sector organization established by business and academic leaders to catalyze the growth of the AI and machine learning communities in British Columbia and establish the province as a global leader by 2025. AInBC also provides partnerships and programs such as Athena Pathways, aimed at educating women in artificial intelligence, machine learning and data science to enhance Canada's talent pool and promote inclusivity. |
| The Quantum<br>Algorithms Institute                                   | A collaboration between government, the academic community and private quantum computing companies. Their goal is to produce highly qualified professionals in advanced computing and algorithmic research, as well commercializing the products of their research and development. Quantum computing has the potential to enhance machine learning algorithms and Al models.  |

#### **Research Centres in B.C.**

| INSTITUTION | AREAS OF FOCUS |
|-------------|----------------|

| Simon Fraser University's<br>(SFU) Big Data Hub  | Provides a platform for the public and private sector to share best practices, projects and insights into how big data and AI are being used to create innovative and equitable solutions to challenging problems.   |
|--|--|
| Simon Fraser University's<br>(SFU) Natural Language<br>Laboratory  | Founded in 1983 and is one of the largest North American labs working on natural language processing and computational linguistics. In 1999, lab researchers formed a company, Axonwave Software Inc., which uses language technology software and was later acquired by Matrikon.   |
| The University of<br>British Columbia's (UBC)<br>Biomedical Imaging and<br>Artificial Intelligence<br>Research Cluster.          | Enhancing the understanding of how molecular, cellular and tissue structure, and organization influence normal and diseased tissue function to facilitate personalized medicine.   |
| The University of British<br>Columbia's (UBC) Centre<br>for Artificial Intelligence<br>Decision-Making and<br>Action Lab (CAIDA) | UBC's main Al research organization which is focused on the development, analysis and application of Al systems for decision-making and action, enabled by core Al technologies such as machine learning and automated reasoning. With \$225 M in funding and over 400,000 citations to date, the Centre boasts a community of 500 students and over 80 faculty members. |
| The University of<br>British Columbia's (UBC)<br>Computer Vision and<br>Robotics Lab   | Developing algorithms for image and video understanding, multi-modal modeling, 3D computer vision, human pose estimation and large generative models for computer vision applications.   |
| University of Victoria's<br>(UVic) Matrix Institute for<br>Applied Data Science  | Partnering with industry, government and other academic institutions on applications spanning drug candidate identification, wildfire detection, mobile health strategies and pollution modelling.   |

## **Supportive Government**

From grants and tax credits to progressive immigration policies, the Canadian and British Columbian governments offer a range of initiatives to support the Al sector, including:

- Small Business Venture Capital Program: B.C. investors receive a 30% tax credit on their investment in a venture capital corporation (VCC) or an eligible business corporation (EBC).
- Scientific research and experimental development (SR&ED) tax credit: For qualifying corporations that are Canadian-controlled private corporations (CCPCs) that carry on SR&ED in B.C.
- Fast-tracked immigration initiatives: The federal Global Talent Stream program and B.C. Provincial Nominee Program (PNP) enable companies to hire qualified talent in as little as two weeks.
- Employee subsidy programs: Such as the Innovate BC Innovator Skills Initiative (ISI), which provides up to \$10,000 to help employers hire a new employee and Mitacs, which provides \$15,000 in internship funding for research talent.
- Federal initiatives: Such as the Pan-Canadian Artificial Intelligence Strategy (PCAIS)—the world's first national AI strategy, with \$125 M in funding to establish Canada's leadership in AI and Scale AI; Canada's AI Global Innovation Cluster, which uses government and private funding to build the next-generation supply chain and boost industry performance through AI technologies; and appointments of Canadian Institute for Advanced Research (CIFAR) AI Chairs at UBC and SFU, which is the world's first national AI strategy to advance research, training, and innovation in AI.
- A strong regulatory framework around information privacy.
- Tailored advice and support for investors, including access to government and industry contacts; opportunities to meet with experts in tax, real estate and law; familiarization tours; and a single point of contact to explore business location and expansion opportunities.

Other Non-Governmental Programs and Initiatives:

- AI Vertical Accelerator Program: Offered by the BC
   Tech Association, this program helps small and medium-sized tech businesses address growth gaps and connect with leading AI experts, mentors, talent and international customers.
- Athena Digital Leaders: Offered by Athena Pathways, this program supports dozens of B.C. companies across industries by subsidizing the placement of highly skilled women and new immigrants with expertise in machine learning, data science and management into project and long-term roles.
- **Growth Venture Co-Investment Fund:** Offered by the Business Development Bank of Canada (BDC), the \$300 M Growth Venture Co-Investment Fund 2 targets late-stage innovation-based businesses leveraging AI and machine learning applications for eCommerce, agritech, edtech, healthtech, blockchain technology for fintech, cybersecurity, insurtech, Internet of Things (IoT), mobility or Industry 4.0.
- Deep Tech Venture Fund: Offered by the Business Development Bank of Canada (BDC), this 12-year fund focuses on early-stage equity investments in Canadian companies in deep tech verticals such as quantum information sciences, photonics, electronics, foundational artificial intelligence and related sectors.







## **British Columbia's Competitive Advantages**

- Prime location and proximity to the Cascadia Innovation Corridor
- Multiple technology clusters in cities including Vancouver, Victoria and Kelowna
- Leaders in academic research and innovation
- Large, educated workforce of more than 153,000 across the broader tech ecosystem
- High quality computing science talent at competitive costs
- Close ties to the United States, Europe and Asia
- Competitive corporate and personal income taxes and tax incentives
- One of the best credit ratings in Canada
- High quality of life









## Join these and other innovators who call B.C. home:

- 1QBit Avigilon Borealis Al Certn Grammarly
- Glia Klue Sanctuary AI ThoughtExchange
- Visier Wayve Technologies Weir Group

## British Columbia, Naturally.

