SCALE|AI

Press release

SCALE AI announces its largest financing round of 2021 with twelve projects and $71 million in investments in artificial intelligence

Montreal, December 8, 2021 – With twelve projects representing a total of $71 million in investments announced today by SCALE AI, the Artificial Intelligence (AI) integration movement is continuing its rapid growth in Canada. From the supply chain for aviation parts to production planning for agriculture or forecasting for consumer products, AI plays a crucial role in improving revenues and reducing costs across diverse industries. SCALE AI continues to be an important actor in the AI ecosystem, allocating recent contributions of $3.4 million from the Government of Quebec and $23 million from the Government of Canada to supply chain projects which contribute to consolidating quality jobs and the productivity of our businesses and industries.

The Honourable **François-Philippe Champagne, Canada's Minister of Innovation, Science and Industry** says: "The pace at which artificial intelligence is integrating across all sectors of the Canadian economy is impressive and is a clear demonstration of the competence and vision of our Canadian businesses and workers. We are building on Canada's leadership in AI, and the unique projects announced today will help strengthen our supply chains while creating good jobs for years to come."

Pierre Fitzgibbon, Minister of Economy and Innovation and Minister Responsible for Regional Economic Development, said, "Our artificial intelligence ecosystem is a strength we need to build on for innovative economic growth. By supporting SCALE AI, our government reaffirms its commitment to accelerating the implementation of new technologies in Quebec companies, so they are more productive and competitive."

Julien Billot, CEO of SCALE AI, pointed out, "Every time SCALE AI announces new investments, I am impressed by how these unique projects address supply chains issues that are widely relevant to our businesses and industries. Our role in the Canadian AI ecosystem gives us the privilege to participate at the forefront of AI technological advances. I'm thrilled to see these companies integrate AI to acheive extraordinary results yet so naturally."

Hélène Desmarais, **Co-Chair of the SCALE AI Board of Directors,** added, "Once again, this cohort of projects tells the stories of Canadian corporate leaders that are forward-thinking and understand the competitive edge that AI can leverage. As a world-renowned hub for AI, our country is equipped with sharp minds and governments that support AI innovation and harness its game-changing power."

Twelve projects representing investments of $71 million

→ Cognitive Capabilities for Aero-engines' Aftermarket

Partners: Pratt & Whitney, McKinsey & Company Canada, MOOV AI, Cognitive Group, Standard Aero Limited Winnipeg, Vector Aerospace Engine Services-Atlantic Inc, Schaeffler, Paradigm Orillia Technology, Meloche

SCALE AI's investment: $7.3 million

Total investment: $23.5 million

Pratt & Whitney Canada supports the broadest, most diverse fleet of aircraft engines in its industry, with more than 13,000 operators and nearly 65,000 engines in service. Customer trends that require increasingly faster global logistics coupled with complex supply chains and demand variability make AI a natural next step to deliver speed and availability.

"Artificial Intelligence is a powerful tool that cuts through complex data to provide predictive insights, resulting in a strong, reliable demand planning that extends all the way through our supply chain. As our industry recovers from the impact of COVID-19, accelerating supply chain efficiency to ensure our customers have the parts and services they need to grow their businesses is more important than ever," remarked Maria Della Posta, president of Pratt & Whitney Canada. "We're excited about developing our AI capabilities, which, combined with decades of innovation, will position us with an enduring competitive advantage throughout every aspect of our business."

→ Predictive Analytics for Aviation

Partners: Bombardier, Globvision, Ivado Labs

SCALE AI's investment: $5.8 million

Total investment: $11.7 million

Aircraft maintenance is typically composed of largely scheduled activities at specific intervals and unscheduled activities when aircraft parts need repair. Bombardier's Aftermarket team aims to transform its core approach and culture from traditional maintenance to condition-based monitoring and preventive maintenance. The goal of the project is to enable a more proactive approach to maintenance, limit aircraft downtime and reduce "Aircraft on Ground" (AOG) costs for Bombardier aircraft, as well as providing unique state-of-the-art maintenance support to customers.

"As part of its digital transformation, Bombardier is seeking to improve its supply chain and aircraft support activities by developing predictive analytics models. The predictions, which will be powered by advanced AI algorithms, are expected to reduce maintenance costs and aircraft downtime, as well as considerably improve the overall customer experience" says Jean-Christophe Gallagher, Executive Vice President, Services and Support, and Corporate Strategy, Bombardier.

→ AI Based Quality Control and Machine Analytics

Partners: Crosswing inc, Shield Medical Products, The Design Quantum, York University, Big Nano, LifeCycle Revive, Performance BioFilaments, Kimberly-Clark, Innomar Strategies, Cardinal Health

SCALE AI's investment: $1.3 million

Total investment: $4.2 million

The project will deliver a comprehensive quality control system that will leverage both AI and machine learning through computer vision to increase quality standards and production outputs. This system will also integrate IoT and sensor data into a machine analytics module that will compile and analyze telemetry to enable predictive maintenance. "By significantly improving the quality control standards while meeting demand and reducing the need for labor intensive processes, this will create an increase in customer trust, production capacity, and shared intelligence for SMP and its supply chain partners.", mentions Aryan Durrani, Managing Partner.

The transformative benefits of the technology in this project can be realized across many broader adjacent markets such as clothing and accessories manufacturing. By design, this solution will be deployable quickly without the need for specialized resources such as data scientists and machine vision engineers.

→ AI-powered Satellite Constellation Production

Partners: MDA, Connektica Solutions, Mafina Solutions, Ivado Labs

SCALE AI's investment: $2.7 million

Total investment: $5.7 million

"Today's satellite market is rapidly pivoting from launching a small number of largely independent satellites to deploying hundreds of satellites in constellations working together as a single system. This transformational shift adds a level of complexity and innovation that requires satellite manufacturers and their supply chain partners to rethink how we design and build our satellite systems. As a result, the supply chain management required to support the scale and complexity of constellation projects is becoming exponentially more technology intensive," explains Mike Greenley, CEO, MDA.

In response to this challenge, MDA is seeking to transform its supply chain operations by leveraging artificial intelligence (AI) to support the volume production of its space products.

The solution will optimize supply chain inventory, manufacturing schedules and performance during the production of the satellites and their subsystems.

→ AIoT fulfullment

Partners: Attabotics, Canadian Tire, Microsoft, Intel technology of Canada ULC, AltaML and Amii

SCALE AI's investment: $2.5 million

Total investment: $7 million

Attabotics has developed an innovative 3D robotic goods-to-person storage system that offers automated retrieval and real-time order fulfillment. By reducing a company's warehouse needs by 85% and reducing labour costs by 75%, Attabotics' solution is enhancing logistics and inventory management across Canada and beyond. Adding AI (Machine learning & Operations Research) to the command and control of the robotic solution makes the Attabotics offering more efficient while maximizing the throughput and uptime.

"These advancements will have a direct impact on the serviceability of the product. Not only will customers see lower operating costs, which are already significantly decreased by our technology, but by maximizing the number of items picked-up by the robot, orders will be gathered faster and more efficiently, further reducing the fulfillment cost for our customers.", mentions Neeraj Gupta, Chief Strategy Officer at Attabotics.

→ AIStotle

Partners: SemiosBIO Technologies Inc., Laughing Coyote Orchards, Ivado Labs

SCALE AI's investment: $1.6 million

Total investment: $3.6 million

As the leading precision-farming platform, and the world's largest independant agtech provider, Semios is focused on simplifying the grower's experience by bringing important, interrelated crop data into one easy-to-use platform. Leveraging a network of sensors that provide more than 500M data points measuring climate, soil moisture, insect and disease activity daily, Semios applies big data analytics and machine learning to reduce and mitigate crop risks for growers. With weather being the primary driver of nearly all crop and pest development, granular, accurate, and reliable forecasting that is hyper-localized to an orchard's unique conditions is imperative.

"This project will leverage Semios' robust historical data set of in-canopy microclimate conditions to develop spatial weather forecasting tools designed to account for variability in a site's crop and topographic characteristics. These new capabilities will provide growers with more precise and granular weather predictions that are tailored to the in-canopy conditions of their orchard, supporting more reliable decision-making. Through these activities, we will be able to identify key geospatial locations for sensor placement that will provide the opportunity to help growers worldwide reduce chemical inputs, better manage water, organize farming data and improve crop outcomes", mentions Stuart Shiell, Lead, Data Insights at SemoisBIO.

→ AI for Energy Supply Chain Feedstock Optimization

Partners: Tidewater, Validere, Nova Analytics, Queen's University
SCALE AI's investment: $1.2 million
Total investment: $3.6 million

Trillions of dollars of commodities change hands multiple times in the Canadian and global energy supply chains with little real-time visibility into their attributes. The resulting inefficiencies increase energy costs and emissions across the world's largest supply chain. Tidewater has partnered with Validere to use an AI-powered, universal data layer that consolidates and augments multiple data sources into a single source of truth to make better operational, commercial, and ESG decisions. The best course of action can now be determined at a system level by sourcing the appropriate feedstocks for all steps of the supply chain. The result is better economics, reduced energy costs for Canadians, and tangible greenhouse gas emissions reductions.

"We are proud to be involved in creating technology jobs in Canada and this project is a great example of the large role energy plays in all facets of the Canadian economy. These tools are useful in both day-to-day operations, but also in the strategic planning of product movements." - Terrence Dumont, EVP Montney at Tidewater Midstream.

"Validere is excited to continue our work with great partners like Tidewater and SCALE AI. Making the energy supply chain more efficient using technology is one of the biggest environmental and economic opportunities available today. We are especially proud to be creating our technology in Canada and driving job growth here. Validere has created over 20 Canadian jobs this year, and this project has certainly supported our growth." - Nouman Ahmad, co-founder and CEO at Validere

→ Staff optimizer and two-way product recommender for eCommerce

Partners: Kognitive Tech Inc., Ivado Labs, Roy Foss, Cellcom
SCALE AI's investment: $1 million
Total investment: $2.9 million

Kognitive Tech, a leading eCommerce enterprise, is excited to be adding their first AI capabilities to their software suite. This project is designed to build strong personalization capabilities scalable for retailers. The developed tools will first provide retailers their clients' clustering, scoring, and prioritization in real-time and with machine learning in order to better capture demand and optimize their store resources (e.g., required staff at a given time). A product recommender will subsequently provide product and service recommendations for the relevant customers' clusters based on expected customer needs and available inventory.

"The goal with this project is to ultimately grow retailer's transaction conversion rates, or demand capture, while increasing supply chain efficiency. It will be very beneficial to retailers as they will be able to offer more tailored products and services to their customers", specifies Josh Singer, CEO.

→ Industrial video analytics for manufacturing efficiency

Partners: Pacefactory inc, Magna International, University of Guelph, Alberta Machine Intelligence Institute (AMII), University of Quebec at Rimouski, Toyota Motor Manufacturing Canada, Dupont Sustainable Solutions

SCALE AI's investment: $1 million

Total investment: $2.9 million

Industrial video analytics uses computer vision, AI and machine learning technologies to study motion patterns of production processes and identify opportunities for improvement or help explain non-standard unexpected losses of time or motion. Current continuous improvement techniques are very manual and time consuming, and not very effective. Using AI to process large amounts of data, Pacefactory, along with its consortium partners, seeks to develop advanced video analytics solutions and processes to solve some of the costliest production problems in manufacturing.

"In this project, Magna International will participate in the development of AI video analytics solutions to optimize supply chain in their Canadian operations. Their manufacturing facilities will provide real case studies thus offering added value in the development of Pacefactory technology and improving logistics' effectiveness.", mentions Sean Clare, Co-Founder of Pacefactory.

→ Developing an AI-Driven Platform for Last Mile Delivery and Home Installation

Partners: Quick Contractors, Canadian Tire, Genaire Transport, Tech Consultants Group (TCG)

SCALE AI's investment: $0.65 million

Total investment: $2 million

QuickContractors.com Inc. has partnered with Canadian Tire Corporation Ltd. to develop a SaaS AI platform that combines real-time data and AI to optimize last-mile delivery and product installations for large Canadian retailers.

The company is developing an intelligent platform with robust optimization capabilities that will synthesize existing and real-time data inputs, including inventory availability, delivery carrier details, delivery locations, GSP, contractor skill levels and more, to improve the capacity planning, scheduling and logistics of over 5000+ national contractors and delivery agents.

"This project will enable Quick Contractors to provide a cutting-edge customer experience, minimize excess labor capacity and harmonize the scheduling of heterogeneous resources to its retail partners, enabling significant AI-powered efficiency gains in last-mile supply chain management.", mentions Trevor Bouchard, CEO.

→ E2E ML-based Demand Forecasting

Partners: Unilever Canada, Larus Technologies, SOSCIP

SCALE AI's investment: $0.5 million

Total investment: $2.2 million

Because it offers everyday consumer products in retailers across the country, Unilever's supply chain is central to its success. By utilizing internal and external data, the End To End- and Machine-Learning-based Demand Forecasting solution, developed by Unilever Canada's Collective Intelligence and AI/ML analytics strategic partner (Larus Technologies) and supported by SOSCIP consortium smart computing platform, ensures optimal forecasting for Unilever.

Gary Wade, President, Unilever Canada: "Accurately forecasting product demand is essential for Unilever as a fast-moving consumer goods company, permitting us to optimize production and distribution, while making essential products available to all Canadians. Using unique AI expertise to provide data driven insights, this project will have a significant impact across the broader supply chain, thus benefiting all stakeholders."

→ Precision Harvest

Partners: McCain, Fiddlehead, Resson, Riverview Farms Corp, CP

Through this proposal, partners want to harness the power of data and predictions to give farmers better tools to be proactive about managing their crop and diminishing the impacts of weather uncertainty. The project will help growers in sequencing their fields for

Farms Ltd, Swansfleet Alliance, Valley Farms	harvest against objective criteria (e.g., canopy health, wet spots, etc.) to maximize yield.
SCALE AI's investment: $0.75 million **Total investment:** $1.8 million	"The data and predictions will also support production planning decisions at McCain, helping us optimize potato pile management, reduce waste and control costs. This in turn supports the Canadian food supply chain overall, by reducing the need to source potatoes from other countries and reducing costs throughout the food value chain that, ultimately, impacts restaurant operators and consumers.", explains Caroline Morissette, VP Data & Analytics.

About SCALE AI (scaleai.ca)

As Canada's AI supercluster, SCALE AI acts as an investment and innovation hub that accelerates the rapid adoption and integration of artificial intelligence (AI) and contributes to the development of a world-class Canadian AI ecosystem.

Based in Montreal, funded by the federal government and the Quebec government, SCALE AI has nearly 120 industry partners, research institutes and other players in the AI field. It develops programs aimed at supporting investment projects of companies that implement real-world applications in AI, the emergence of future Canadian flagships in the sector, as well as the development of a skilled workforce.

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