

DRAFT Announcement Plan

Jacob Jaremko – TD Grant

Overview

Jacob Jaremko (Associate Professor, University of Alberta; Fellow and Canada CIFAR AI Chair, Amii) was recently awarded \$450,000 through the TD Bank Group's TD Ready Commitment for Better Health. The grant focuses on removing barriers to ultrasound access to improve health outcomes.

This document outlines high-level plans for a joint announcement of the grant between TD Bank, the University of Alberta and the Alberta Machine Intelligence Institute (Amii). *Note: Dr. Jaremko was simultaneously successful in securing an Alberta Innovates AICE grant – this grant will not be part of this announcement.*

About the Project

Equitable access to advanced diagnostic imaging is critical for improving health outcomes for all. AI-enhanced ultrasound can reach rural, remote, and inner-city communities, providing critical information to doctors regarding prognosis and best course of action. TD funding will accelerate the reach of AI-enhanced ultrasound into those communities, improving care for the most vulnerable patients.

Removing barriers to ultrasound access will improve better health outcomes in several ways:

- Handheld portable AI-enhanced ultrasound probes can be distributed in even the smallest or most remote communities, reducing the need for patient travel.
- AI support can reduce the amount of training needed for medical personnel to perform the scans and provide reliable triage and diagnosis to support scarce human experts.
- People who might otherwise avoid medical care may be more willing to have a portable ultrasound scan performed by a person they already know and trust within their community.
- Costs may be substantially reduced, enabling new population-health initiatives such as screening for hip dysplasia or cardiac disease to become cost-effective and opening new frontiers for improved care.

Dr. Jaremko will be working to train healthcare workers in the use of his AI-enabled ultrasound technology, which will help people in rural, remote and inner-city communities better access the diagnostic technology.

Announcement Plan

NOTE: These are tentative plans to be discussed between Amii and UAlberta; any announcement will need to be confirmed with TD before moving forward.

Key Messages

- AI-powered ultrasound technology will help to improve equitable access to healthcare
- TD, working with Amii and the University of Alberta, is supporting the translation of innovative research to improve health outcomes
- Academic research is essential for advancing innovation and solving key challenges facing the world

Media Release

A joint media release can be issued to highlight this work and offer opportunities to connect directly with Dr. Jaremko. The release will focus on the important outcomes this work will achieve in terms of improving

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equitable access to healthcare and on the value of industry-academia collaborations for translating academic research into people’s daily lives. The release can also reinforce the importance of academic research for advancing innovation and solving key challenges the world is facing.

The release can also include quotes from organizational leadership at TD, Amii and UAlberta.

Storytelling

Amii will publish an article on Amii.ca about the work with Dr. Jaremko as the primary voice of the story. This article will be adapted from the media release and will link over to any UAlberta stories about the grant.

There is also an opportunity for UAlberta to publish a story – exact details to be discussed.

It is unclear if there is an opportunity for this story to also be published on the TD site, but this should be part of the discussion.

Video

Working with Amii’s Video and Digital Producer, Amii can produce a video about the work featuring Dr. Jaremko. The video will be used to support other storytelling and can be featured on social media (videos of various lengths can be produced to support this purpose). We can also consider additional voices from Amii, UAlberta and TD – but we must be wary of adding too many “characters” into the story. Preference should be given to TD as the grant funder.

Social Media

Amii will promote the written stories and videos on social accounts, including Facebook, Twitter, LinkedIn and Instagram.

There is also an opportunity for the University of Alberta to promote on social.

Timelines & Roles

Activity	Responsible	Date	Notes
Align on draft announcement plan	Amii/UAlberta		
Socialize with TD	Jennifer Pendura		
Confirm Dr. Jaremko’s availability	Spencer Murray		
Confirm date of announcement	ALL		
Video Production plan	Spencer Murray		
Draft media release	Debra Clark		
Approve media release	ALL		
Announcement Day			

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Distribute Media Release			
Coordinate interviews			

Organizational Contacts

Person	Role
Jacob Jaremko, UAlberta, Amii	Spokesperson
Spencer Murray, Amii	Amii lead
TBD, UAlberta	UAlberta lead
Jennifer Pendura, UAlberta	Liaise with TD
TDB, TD	TD Representative
Chris Onciul, Amii	Video Production

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Appendix

Additional Grant Info

Medical imaging allows us to see inside the body to detect pathology, often before it is even obvious to the patient. The average young adult (age 18-44) receives one medical imaging test per year, rising to four per year by age 65 [1]. Ultrasound is a core medical tool and is already one of the most frequent diagnostic imaging tests, performed at a rate of 600 scans/1,000 patients each year in the USA, of which nearly $\frac{1}{3}$ are echocardiograms (cardiac ultrasound) and $\frac{1}{3}$ obstetrical studies during pregnancy [1].[\[1\]](#)

Ultrasound is a harmless diagnostic test which evaluates soft tissues throughout the body in high resolution. It also provides dynamic real-time images that can help assess whether a heart is functioning normally or a fetus is alive. Ultrasound images, generated using the physics of acoustic refraction, are confusing to untrained users, but artificial intelligence (AI) can be harnessed to help acquire and interpret these images. Combining AI and portable ultrasound opens opportunities to extend the reach of medical imaging out of hospitals into the community.

In Canada, ultrasound is performed in hospitals or radiology clinics, but access varies widely. For example, the city of Saskatoon has 11 ultrasound clinics, but the entire northern half of the Saskatchewan province (an area of 300,000 km²) has only one clinic to which patients must travel up to 1,000 km to attend [2]. People in these rural communities utilize ultrasound at rates up to 30% lower than urban residents. There are also social and cultural barriers to accessing ultrasound services: women who are Indigenous or are in the lowest quintile income bracket are each 50% less likely than other women to have the crucial second-trimester obstetrical ultrasound scan to rule out fetal anomalies [3].

Certain types of ultrasounds are easier to access than others. A patient can typically obtain an abdominal ultrasound within one week at Edmonton clinics but may need to often wait months for musculoskeletal ultrasound or cardiac imaging: recent wait times for echo in Winnipeg were 70 weeks [4]. A key reason for these long waits is a lack of specially trained sonographers able to perform these more complex types of ultrasounds.

Overall, ultrasound is an essential core component of high-quality medical care for all Canadians, but there is inequity in access due to geographic, sociocultural, logistical, and economic factors. There is a strong need to reduce this inequity. Given the vast scale of ultrasound utilization, even small changes in access to ultrasound will provide direct improvements to health across large segments of our population.

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Handheld AI-enhanced ultrasound has the potential to dramatically democratize medical care. TD funding will have an instrumental role in supporting the development and delivery of high-quality medical imaging to the Canadian communities and individuals that currently have the greatest barriers to its access.