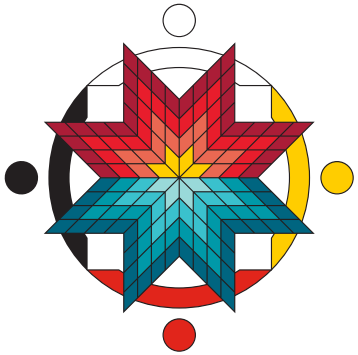
2025

Annual Report

Research & Innovation at George Brown



Land Acknowledgement

George Brown Polytechnic is located on the traditional territory of the Mississaugas of the Credit First Nation and other Indigenous peoples who have lived here over time. We are grateful to share this land as treaty people who learn, work, and live in the community with each other.

Table of Contents

Dear Colleagues and Partners,

As we enter 2025, the demand for research and innovation support from academic institutions continues to grow. This trend highlights our vital role in empowering businesses to navigate and thrive amidst market challenges with agility and creativity. In doing so, we can create a rich landscape of growth and discovery in Canada.

Since the establishment of our Office of Research & Innovation in 2007, George Brown Polytechnic (GBP) has attracted over $110 million in research funding. We have collaborated on 2,167 projects with 2,301 partners, providing 19,245 enriching research experiences for students. In the 2024/25 academic year alone, 114 GBP researchers conducted 134 projects in partnership with industry and community organizations, resulting in the development of 257 new or improved products, services, technologies, and prototypes, creating 965 valuable research experiences. These achievements have involved members of the Office of Research & Innovation as well as colleagues and students from across George Brown.

We work with a wide variety of partners, from startups to multinational corporations and community organizations. For smaller companies, our support is essential in developing product ideas that may be financially unfeasible. For larger organizations, we serve as an extension of their R&D capacity, enhancing their ability to innovate.

Our primary focus areas include product development, sustainability, and social innovation. By aligning our research initiatives with industry needs, we promote innovation that boosts competitiveness and benefits our communities.

As we progress, I invite you to join us on this journey of discovery and innovation.

Together, we can create a prosperous future for our students and community.

Dr. Gervan Fearon
President

Message from the President

Message from the AVP, Research & Innovation

As I reflect on the last year of our Research & Innovation activities at George Brown, one thing seems clear to me: our story relies on chemistry.

Not the kind you find in a lab, or the ancient philosophies that worked to turn metal into gold. Rather, we rely on the intangible connections that form when the right people, ideas, and opportunities come together. Since the Office of Research & Innovation was established in 2007, we have been cultivating spaces where powerful reactions can occur – spaces where Canadian companies, community organizations, students, and researchers can combine their disparate elements to create something extraordinary. It's innovation alchemy.

It's hard to pinpoint what makes this chemistry of course, but it's not hard to see where it thrives.

It thrives in our research teams, where researchers bring their expertise and industry-relevant experience to mentor and guide student researchers. These students, in turn, bring their enthusiasm, their fresh ideas and their promise to our work. Our partners bring their innovative ideas to create a playground where inspiring collaborations happen.

It thrives in our community, an academic environment where all are welcome and supported to be the best version of themselves. Listening to the community around us, we've built significant capacity in areas that are vital to Ontario's economic and social development – from advanced manufacturing and digital transformation to community-based innovation and sustainability.

And of course, it thrives within the Research & Innovation team itself. Made up of passionate and high-performing individuals, this is a team that sees each project as an opportunity to bring together complementary elements: industry ideas, academic rigor, faculty expertise, student energy, and community wisdom. We know that when diverse perspectives have the right conditions to thrive, amazing things can happen. It's in this mix where we find ways to meet the needs of the present without compromising the future.

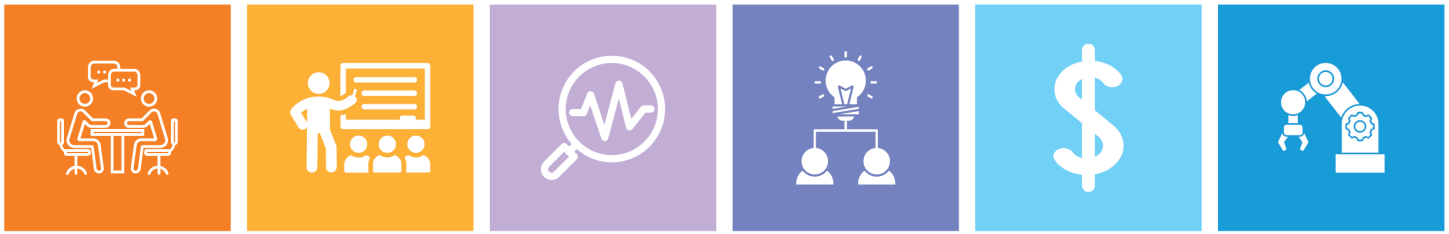
We worked on 154 projects this year, but these numbers only capture part of the equation; they don't measure what happens when a researcher has agency to explore their ideas or when a student discovers their limitless potential. A world of possibility is created when our partners connect with the exact expertise they need to advance their ambitions. That's chemistry.

The stories in this report, covering projects from April 1, 2024 to March 31, 2025, are testaments to the incredible reactions that can happen when the right elements combine. This is a celebration of what we've created, and commitment to continuing this work well into the future.

Dr. Krista Holmes
Associate Vice-President, R&I

By the Numbers

IN 2024/25



134
PARTNERS

965
STUDENT RESEARCH EXPERIENCES

154
PROJECTS

112
RESEARCHERS

$6.8M
IN FUNDING (RECIEVED)

257
PROTOTYPES DEVELOPED

SINCE 2007

2,167
PARTNERSHIPS WITH COMMUNITY & INDUSTRY

19,245
STUDENT RESEARCH EXPERIENCES

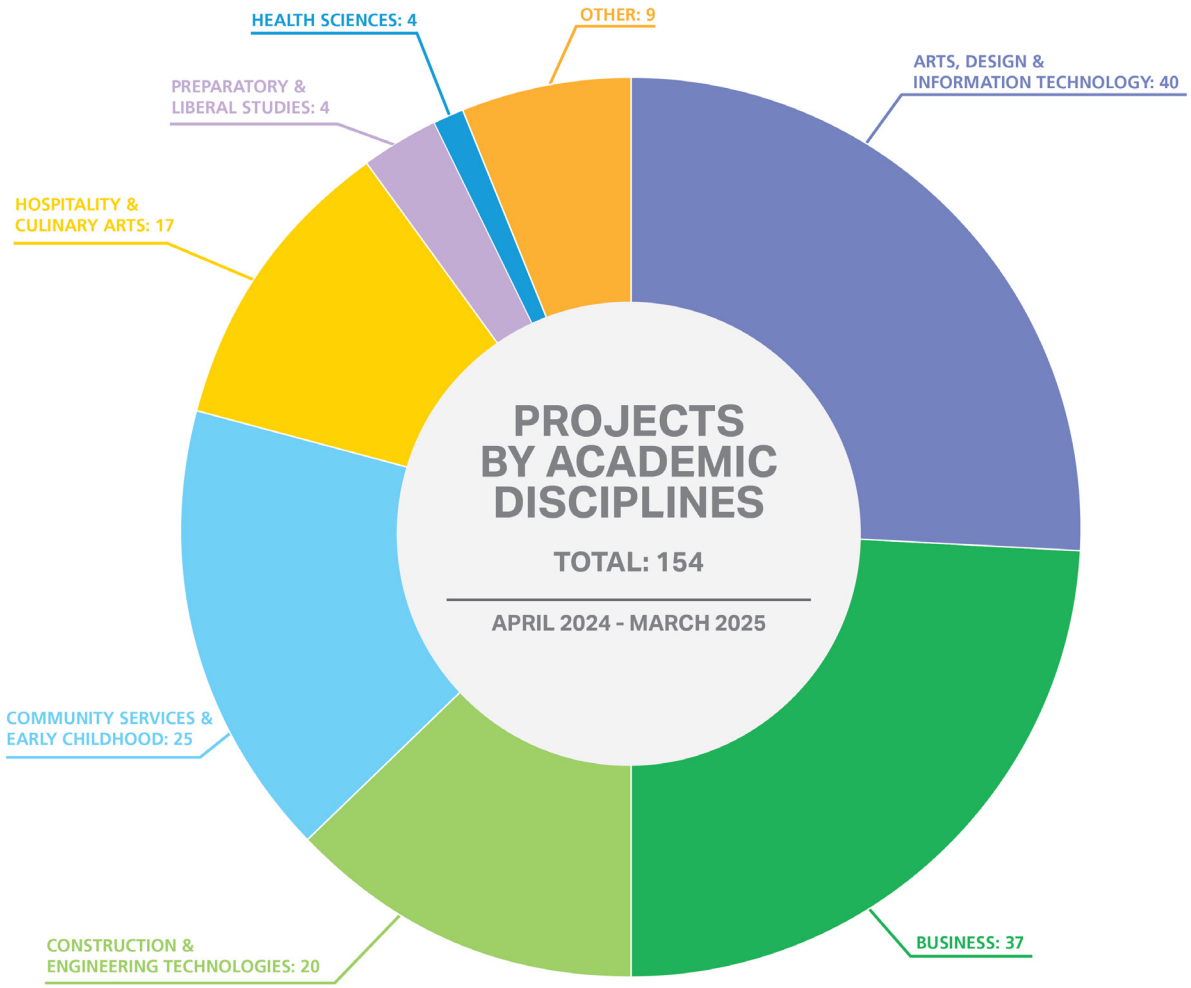
2,301
COLLABORATIONS

1,593
RESEARCHER ENGAGEMENTS

$110M
IN RESEARCH FUNDING

*These metrics represent the fiscal period between April 1, 2024 to March 31, 2025

By the Numbers



*These metrics represent the fiscal period between April 1, 2024 to March 31, 2025

Research, Innovation & Entrepreneurship Showcase 2025

On Friday, May 30th, George Brown proudly hosted the 2025 Research, Innovation & Entrepreneurship Showcase (RIES), jointly presented by startGBC and the Office of Research and Innovation. This signature annual event was one of the biggest to date, celebrating the innovative spirit of GBC's students, alumni, faculty, and partners by highlighting cutting-edge projects, entrepreneurial ventures, and collaborative research and innovation initiatives. It was hosted at George Brown's groundbreaking new Limberlost Campus.

This year, over 200 attendees came to the event, which served as an exciting kickoff to Congress 2025. Energy was high as the new Limberlost Campus transformed into a hub of innovation, collaboration, and creativity.

Part showcase, part knowledge-sharing

The day's program was part showcase—with projects ranging in health equity to green tech to social innovation and everything in between—and part opportunity to forge meaningful connections and learn about what's happening here at George Brown. Student researchers, researchers, and industry partners from 22 projects came to display their project work, and startGBC populated Entrepreneur's Alley with a slew of Ontario-based businesses and start-ups. Four panels in total rounded out the day's program.

Speed Mentoring

The day closed with the startGBC Speed Mentoring Session. Over the span of an hour, students and founders engaged in real-time ten minute coaching sessions with business experts—when the time was up, the participants swapped seats.

"At George Brown, our research teams are more than contributors—they are co-creators of knowledge and architects of change. They ask bold questions, challenge assumptions, and push boundaries."

Dr. Krista Holmes,
Opening Remarks of RIES 2025

Year in Review

Recognizing Impact

Events

Joint/Co-Hosted Events GBP AMP, in collaboration with Intellectual Property Ontario (IPON), hosted a presentation with renowned IP lawyer, Louis-Pierre Gravelle, titled "Unlocking Innovation: Intellectual Property & AMP" (February, 2025)

GBP Research & Innovation, in collaboration with IPON, hosted an event titled "Unlocking Innovation: Intellectual Property & Artificial Intelligence" at GBP's Casa Loma campus. (February, 2025)

GBP Research & Innovation, in collaboration with KITE Creates and IPON, co-hosted an event titled "Unlocking Opportunity through Intellectual Property" at the Toronto Rehabilitation Institute. (October, 2025)

GBP Research & Innovation, in collaboration with IPON, hosted a showcase of college-supported businesses at Limberlost Place. (October, 2025)

GBP's FIRSt team, in collaboration with the Canadian Health Food Association (CHFA) and Okanagan College's BC Beverage Technology Access Centre (BCBTAC), co-hosted a webinar titled "Unlocking R&D Opportunities: Partnering with Colleges for NOW Food & Beverage" (February, 2025)

startGBC, in collaboration with the Black Futures Initiative (BFI) and the Black Student Success Network (BSSN), hosted the Black Excellence Entrepreneur Panel Discussion at GBP's St. James campus. (February, 2025)

The Brookfield Sustainability Institute, in collaboration with the Green Will Initiative, hosted a Member Sustainability Event at Limberlost Place featuring a building tour and presentation by Toronto Hydro. (July, 2025)

GBP and Maple Leaf Sports & Entertainment (MLSE) hosted a joint Lunch & Learn event at the GBP Daniels Waterfront Campus. GBP researcher Ali Kokulu gave a presentation illustrating activities in XR and AI in the sports and entertainment sector. (September, 2025)

Peer-reviewed Publications

Safiuddin, M., Zenwirt, F.*, Shammakh, M.*, Al-Attar, R., Sharifi, B.*, & Tumidajski, P. (2025 Sep). *Segregation-Resistant Carbon Microfibre Reinforced Self-Consolidating Concrete.* Athens Journal of Technology and Engineering, 12(3), 143-160. https://doi.org/10.30958/ajte.12-3-1 doi=10.30958/ajte.12-3-1

Dunne, N.*, Safiuddin, M., Zenwirt, F.*, Shammakh, M.*, Al-Attar, R., Sharifi, B.*, Kim, S.*, & Tumidajski, P. (2025, May 27-28). *Effects of Carbon microfibres and chemical admixtures*

on the fresh properties of self-consolidating concrete [Conference presentation abstract]. Proceedings of the 9th International Conference on Advanced Composite Materials in Bridges and Structures (ACMBS-IX 342-1), Winnipeg, Manitoba, Canada.

F. Zenwirt, F.*, Safiuddin, M., Shammakh, M.*, Al-Attar, R., Dunne, N.*, Sharifi, B.*, & Tumidajski, P. (2025, May 27-28). *Physical and mechanical properties of carbon microfibre reinforced self-consolidating concrete* [Conference presentation abstract]. Proceedings of the 9th International Conference on Advanced Composite Materials in Bridges and Structures (ACMBS-IX 363-1), Winnipeg, Manitoba, Canada.

Smith, B. (2025, June 3-5). *It's about them: Voice of Students (VoS) Insights for Curriculum Design* [Conference presentation abstract]. Proceedings of Canadian Association for the Study of Adult Education (CASAE) 2025 Annual Conference, Toronto, Ontario, Canada.

Gordon Wang published an article in the Journal of Administrative Sciences titled "Effects of a Flipped Classroom College Business Course on Students' Pre-Class Preparation, In-Class Participation, Learning and Skills Development." (August, 2025)

Other Publications

Gillis, L., & Ford, W. (2025). *Cooking Compassion: A guide on Fueling Your Mind and Feeding Your Heart.* FriesenPress, Altona, Manitoba, Canada.

Gary Hoyer's School Food Programs published School Food Programs Around the World - Lessons for Canada in 2025

Conference Presentations

Jennifer Mitsche presented at the 2025 Devour Campus Conference at GBC and the University of Toronto, in Toronto, Canada.

Rusa Jeremic was Moderator and Organizer, (June 5, 2025) CASAE Closing Plenary: ReFraming Partnerships: Community Insights on Academic Research, Congress 2025, Toronto, ON, and a presenter, (June 3, 2025) *Visibilizing the Invisible: Grassroots Leaders Experiences of Going Online During the Covid -19 Pandemic.* CASAE Conference, Congress 2025, Toronto, ON

Bartosik, A., & Kinsella, K. (2025, June 6). *A Narrative Analysis of Associates of Learners: Post-Secondary Journeys in Context*. Oral presentation at the 2025 Teaching & Learning Exchange (TLX) SOTL Conference - EvolvED, George Brown College, Toronto, Ontario.

Dunne, N.*, Safiuddin, M., Zenwirt, F.*, Shammakh, M.*, Al-Attar, R., Sharifi, B.*, Kim, S.*, & Tumidajski, P. (2025, May 27-28). *Effects of Carbon microfibres and chemical admixtures on the fresh properties of self-consolidating concrete* [Conference presentation]. 9th International Conference on Advanced Composite Materials in Bridges and Structures, Winnipeg, Manitoba, Canada.

Jeremic, R. & Yuyitung, L. (June 3, 2025) Visibilizing the Invisible: Grassroots Leaders Experiences of Going Online During the Covid -19 Pandemic. CASAE Conference Proceedings, Congress 2025, Toronto, ON

Khatri, R., Khatiwada, B.^, Gandhi, V.*, & Pun, I.* (2025, March 24-27). *Reading strategy use among EAP and discipline specific students in Canada. Paper presentation at the Teaching English to Speakers of Other Languages* (TESOL) International 2026 Convention & Expo, Salt Lake City, Utah, USA. https://www.tesol.org/professional-development/education-and-events/in-person/tesol-convention/

Khatri, R., Khatiwada, B.^, Gandhi, V.*, & Pun, I.* (2025, June 6). *Exploring Reading Strategy Use Among Students in English for Academic Purposes and Discipline-Specific Academic Programs: Survey Research.* Poster presentation at the 2025 Research Innovation & Entrepreneurship Showcase (RIES), George Brown, Toronto, Ontario.

Khatri, R., Khatiwada, B.^, Gandhi, V.*, & Pun, I.* (2025, June 6). *Exploring Reading Strategy Use Among Students in English for Academic Purposes and Discipline-Specific Academic Programs: Survey Research.* Poster presentation at the 2025 Teaching & Learning Exchange (TLX) SOTL Conference: EvolvED, George Brown, Toronto, Ontario.

Marshall, A., Aguiar, S.*, & Sejpal, P.*, Conde, R., & Pileri, G.M. (2025, May 30). *Enhancing Dental Assisting Education with Virtual Simulations: Impact on Student Exposure, Skill Acquisition, and Clinical Preparedness of Specialty Dental Procedures.* Poster presentation at the 2025 Research Innovation & Entrepreneurship Showcase (RIES), George Brown, Toronto, Ontario, Canada.

Marshall, A., Aguiar, S.*, & Sejpal, P.*, Conde, R., & Pileri, G.M. E*xploring VR in Dental Assisting Education: A Visual Journey Through Immersive Learning.* Poster presentation at the 2025 Teaching & Learning Exchange (TLX) SOTL Conference - EvolvED, George Brown College, Toronto, Ontario., George Brown, Toronto, Ontario.

Smith, B. (2025, June 3-5). I*t's about them: Voice of Students (VoS) Insights for Curriculum Design* [Conference presentation]. Proceedings of Canadian Association for the Study of Adult Education (CASAE) 2025 Annual Conference, Toronto, Ontario, Canada.

Smith, B., & Meshkatee M.* (2025, May 30). *Voice of the Student (VoS) in the School of Marketing* (SoM). Poster presentation at the 2025 Research Innovation & Entrepreneurship Showcase (RIES), George Brown, Toronto, Ontario, Canada.

Stahlbrand, L., Scott, K., Milicevic, M.*, Blay Palmer, A.**, Sawtell, P.**, Kranenburg, D. (2025, May 30). *Development of Sustainable Regional Food Systems in Southern Ontario George Brown Food Learning and Growing Community Project*. Poster presentation at the 2025 Research Innovation & Entrepreneurship Showcase (RIES), George Brown, Toronto, Ontario, Canada.

Zenwirt, F.*, Safiuddin, M., Shammakh, M.*, Al-Attar, R., Dunne, N.*, Sharifi, B.*, & Tumidajski, P. (2025, May 27-28). *Physical and mechanical properties of carbon microfibre reinforced self-consolidating concrete* [Conference presentation]. International Conference on Advanced Composite Materials in Bridges and Structures, Winnipeg, Manitoba, Canada.

Other Presentations

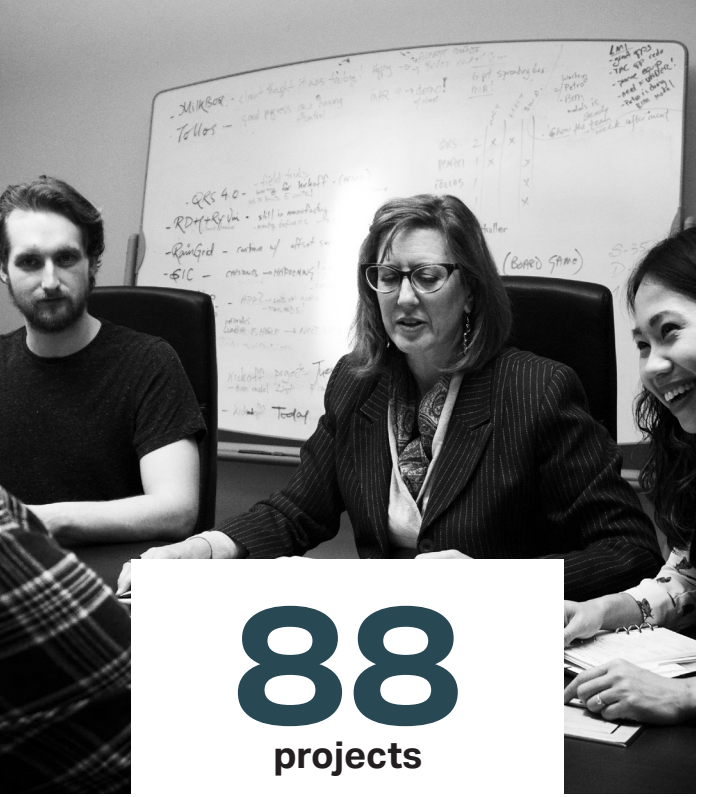
Gillis, L. (2025, December 4). *Linda Gillis, Cooking Compassion: A Collaborative Approach to Mental Health.* Oral presentation at the The Faculty of Business, Creative Industries and Culinary Arts Third Annual Food Research Forum, Chef School, George Brown, Toronto, Ontario, Canada.

In the Media

Blair Smith was featured on CBC's Metro Morning with David Common in a segment titled "Should we think of students as customers?" (May, 2025)

Tammy Vaillancourt, Doris Miculan-Bradley, and partner Reid's Distillery were featured in a Globe and Mail article titled "How a Toronto college turned cocktail scraps into an award-winning spirit". The article profiled the team's work on the Citronino project. (March, 2025)


GEORGE BROWN
EXPERIENCE UNIVERSITY
Nuclear Promise X
DIRECT AIR CARBON CAPTURE (DACC) PROJECT
NOIT International
WEARABLE TECH FOR COGNITIVE WELLNESS
DELL



88
projects

76
researchers

531
student research experiences

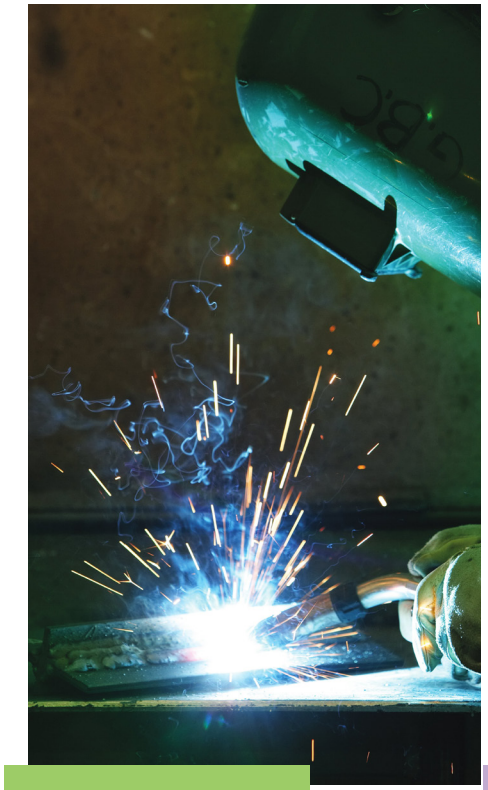
Institute

Product Development

George Brown researchers develop new and improved products from concept to commercialization across virtually every industry.

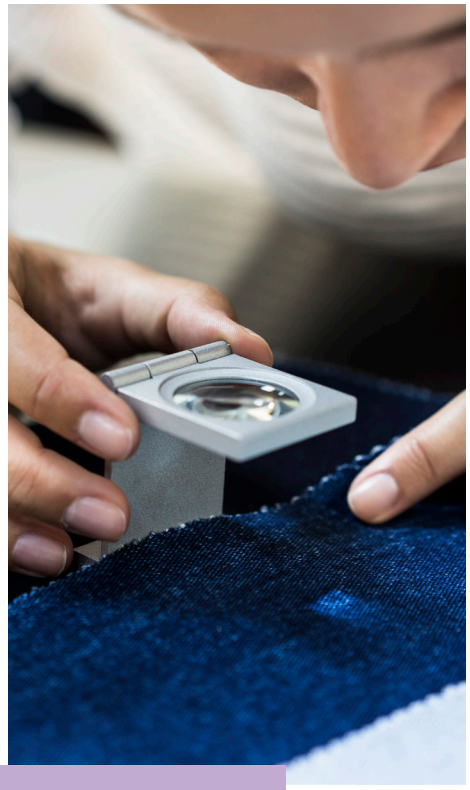
Studios:

- *Advanced Manufacturing & Prototyping*
- *Fashion Innovation & Textile Technology*
- *Food & Beverage Innovation*
- *AI Integration*



Advanced Manufacturing & Prototyping

Designing, developing and manufacturing physical goods and services



Fashion Innovation & Textile Technology

Textile recycling, smart textiles, wearables, digital design technology & more

Food & Beverage Innovation

Food science research and development services to support Canada's food and beverage sector

AI Integration

Developing digital prototypes, data architecture and adoption of new technologies

PROFILE

Dr. Syed Naveed Rizvi

Lead Fabric Scientist, FITT

Dr. Syed Naveed Rizvi is an accomplished Textile Researcher with a PhD in Materials Science from the University of Manchester and over a decade of experience in textiles, product development, and PPE. With expertise in R&D and lab management, Dr. Rizvi leads the material testing service offering as part of the Textile Innovation Lab at GBC.

What is a project you worked on this year that really inspired you?

The project that inspired me the most this year was our work with Revol Cares, where we developed a methodology to test the absorbency and performance of reusable menstrual underwear.

What made it especially meaningful was how much I learned along the way. I grew up with certain cultural beliefs and assumptions about menstruation, and working on this project encouraged me to revisit those ideas. Through the literature, and especially through Dr. Jen Gunter's writing, I learned to see menstruation for what it truly is: a beautifully coordinated biological process.

That realization gave the scientific work an added purpose. We weren't just developing a test method we were contributing to a conversation that can help challenge outdated perceptions and support more open, informed dialogue.

That combination of science, learning, and social impact is what made this project so inspiring.

What is your favorite part of working with students?

My favourite part of working with students is watching their curiosity grow into confidence. In the lab, you can see the shift when they go from asking, "Am I doing this right?" to "Here's what I discovered."

Fashion and science are two words that don't end up in a sentence together often. What are some misconceptions people might have about your work?

One common misconception is that fashion is only about aesthetics: colours, trends, and style. Fashion is deeply connected to material science, engineering, sustainability, and human-centred design.

When we talk about performance textiles, moisture management, absorbency, comfort, durability, or even sustainability, we're talking about science. My work often sits at the intersection of biology, physics, and textile engineering. The Revol Cares project, for example, required understanding the chemistry of fibres, fluid behaviour, and real-world wear conditions.

So while "fashion" and "science" may seem far apart, in my world they meet every single day.

What was your biggest learning or takeaway from your year working on this research?

My biggest learning was realizing how much opportunity there still is for innovation in menstrual product testing. There are major gaps in how we measure performance.

Developing a method that reflects real-world use, intermittent flow, pressure, and fluid properties reminded me that science must align with lived experience.

What would surprise people most about your work?

People are often surprised by how much science, experimentation, and problem-solving goes into textiles. Whether I'm testing compression leggings, analyzing insulation performance for sleeping bags, evaluating absorbency in adult diapers, or exploring sustainable materials like corn husk fibres, the work goes far beyond fabrics and fashion.

Another surprising aspect is how interdisciplinary the field is. On any given day I might be working with fluid dynamics, fibre chemistry, heat transfer, biomechanics, or sustainability analysis. Many people don't realize how closely textile research connects to health, comfort, performance, and even environmental impact.

I think the biggest surprise is that textile science often touches topics people don't expect from microplastics and waste reduction, to adaptive clothing, to menstrual health. It's a field where biology, engineering, design, and social issues constantly intersect.

FEATURE

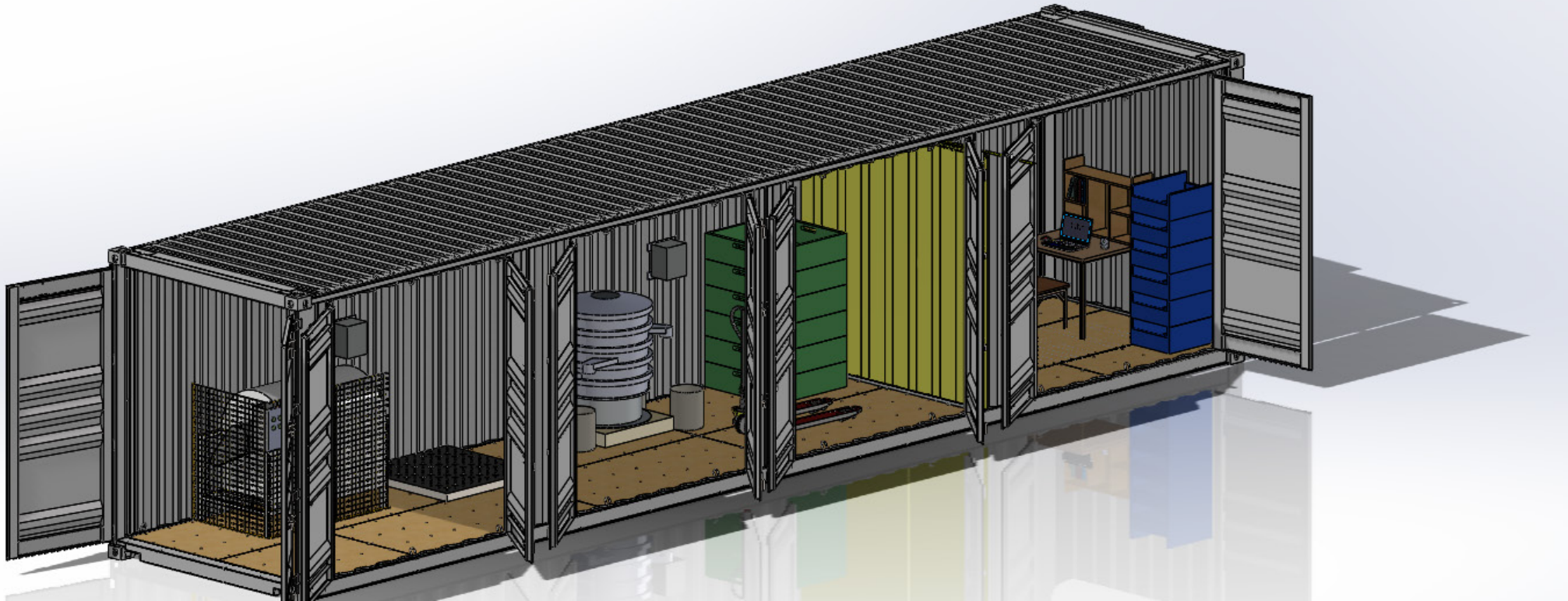
Transforming Agri-Food waste with Infinite Harvest Technologies Inc.

Infinite Harvest Technologies Inc (IHT), a leader in the CleanTech sector based in Niagara, Ontario, is renowned for its innovative use of insects (BSFL) to upcycle organic waste into sustainable, high-value nutrition for animals and soils.

PROJECT TEAM

Principal Investigator: John-Allan Ellingson
Research Assistant: Sebastian Kleefisch
Student Researcher: Alyona Yartseva
Funder: SONAMI FedDev

Find them at
infiniteharvesttech.com



Infinite Harvest Technologies (IHT) is renowned for its innovative Bugs4Rent™ technology, which uses Black Soldier Fly Larvae (BSFL) to convert organic AgriFood waste into sustainable, high-value products for animal and soil nutrition – in just 10 days while reducing Co2e emissions by 80% over other waste disposal options.

"The technology that we have developed is a very sustainable solution overall," says Luis Ortiz, founder and CEO of Infinite Harvest Technologies. "Any food processing company will generate waste from their process, which will be transported and disposed of in the landfill."

But this is hardly a sustainable solution, the company realized.

"Landfill bans of organic waste are coming into play, which will cause a major disposal issue for companies," says Tamara Lockwood, co-founder of IHT. "So what are you going to do with that waste? There really is an imperative to innovate and to find new solutions. Insect bio-digestion is one of those."

Infinite Harvest Technologies' innovation is Bugs4Rent™ a solution that promotes environmental sustainability by optimizing nutrient recovery, upcycling waste destined for landfills, and strengthening Canada's position in green innovation.

"The first step in this process is to get the baby larva. Then we get the customer's waste to feed them with and put it all inside our "black box solution" that we have developed - using software, hardware, IoT sensors - everything we need to optimize this process," says Luis. "So in about 10 days we are able to convert all of that waste into something useful."

The next stage of company growth was to design a Bugs4Feed™ insect processing facility which would complete their closed-loop upcycling process. The company came to George Brown's AMP Labs for help.

First up: the research team, led by John-Allan Ellingson, was tasked with designing a container-based automated system that could mechanically wash, dry, separate, and package larvae and frass. The system would cut labour costs, boost efficiency, and deliver consistent product quality, enabling IHT to scale operations sustainably.

"We knew we needed to do this in a modular way," says Luis. "We needed the technical expertise, the CAD drawings, the engineering and electrical side. That's when the expertise from George Brown came into play."

Based on requirements and available materials provided by IHT, the GBC research team designed and fabricated the electrical system. This included selecting an enclosure and assembling components to support equipment such as the sifter, dryer and pallet scale, key tools in the harvesting process. Meanwhile, after measuring all the equipment on-site at IHT's headquarters, they completed the mechanical design, which incorporated the funneling and feeding input components.

Finally, the fabricated components were shipped to IHT, where the team integrated them into the system, ensuring proper fit, assembly, and functionality, with on-site testing conducted where possible.

When the research wrapped, the project successfully delivered a container-ready system with fabricated electrical and mechanical components, currently in operation at IHT's site.

This new system will help IHT by reducing manual labour and operational costs through automation, improving efficiency and consistency in upcycling organic waste into high value products for the agriculture sector. As their operations expand, the fully integrated electrical and mechanical components will streamline key tasks such as separating and packaging. The new system strengthens IHT's product quality control, aligns with sustainable practices, and cements Infinite Harvest Technologies as a leader in environmental responsible innovation within the Agri-Tech sector.

The potential environmental impacts of this technology are impressive: each Bugs4Rent™ unit diverts 240 tonnes of organic waste from landfills annually, enough to fill over 2,400 standard 240-litre wheelie bins. This diversion cuts emissions by 112.8 tCO_2e per unit per year, roughly equal to the annual energy use of 12 homes, avoiding 280,000 km of road-freight travel, or offsetting the emissions from 56 Toronto–Vancouver flights.

"We should all care about food waste and do as much as possible to divert it from the landfill," says Luis. "Traditional food systems today create competition between humans and animals. By re-using waste and creating animal feed from insects, we help reduce the pressure off the food system. This creates a more sustainable future for all of us on planet Earth."

PROFILE

Aadi Badola, Bruno Ramirez Bonilla & Gozde Baran

Student Researchers , T177 - Computer Programming and Analysis program

Aadi, Bruno and Gozde were on the team developing an AI-powered quality assurance system to automate quality checks in their injection molding process for MS Falcon Tooling and Aideal Technology.

Can you give us a brief description of the project?

Gozde: We developed an AI-powered defect detection system using AI tools. It's a smart, scalable solution aimed at improving quality control on manufacturing side. So, we are doing defect detection with using AI, basically!

What did you enjoy most about working on this project?

Aadi: Collaborating with my team to design a system tailored to the project's requirements. Being able to train and test our designs on real-world data and see them in action was definitely a highlight!

Bruno: There is something beautiful and exciting when solving complex problems, something new that there is no information or very little information.

Gozde: It was great to build complex, complete systems from the beginning - to deploy parts, test parts, and gather feedback. It's a shining part of my resume now.

What was your biggest learning or takeaway from your time working on this project?

Aadi: One of my biggest takeaways was learning how to bridge cutting-edge AI research with real-world industrial applications. This project deepened my understanding of creating solutions which balance performance, adaptability, and overall usability.

Bruno: The biggest takeaway for me is the communication and soft skills. I'm from Peru originally, so I speak Spanish. I've only been in Canada for the period I've been in school, so being able to be to chat with the client, to be closely involved in this in this project with the PMs and everyone involved in it helped me to developed that "English brain" that helped me to communicate more efficiently.

Gozde: How crucial teamwork is to the success of the project! It's like everyone can do different parts and everyone in the team had a different strength. We balanced each other's gaps.

Was there anything that surprised you when working on this project?

Aadi: I was surprised by how much the project's success relied on interdisciplinary collaboration. The AI and Software skills of our research team, the leadership and communication skills of our PI and Project Manager and even the expertise provided by our industry partners all contributed to successful development of our system.

Bruno: It was all surprises, to be honest. There was not a moment where I was not surprised by the task, all the requirements, all the processes that we go through and that was the exciting part!

Gozde: There's a common expression that "a computer learns like a baby" especially with AI. I saw that concept come to life during this project. It's like "This is real!" If you are teaching something, it's learning. It's learning very fast, like a baby, like a toddler.

PROJECT SPOTLIGHT

AI-Driven Quality Assurance with AiDeal Technology & MS Falcon

MS Falcon Tooling and Aideal Technology (MSF/AidT) are industry leaders in their respective fields, bringing together expertise in precision plastic components and AI-driven manufacturing solutions.

Project Team

Principal Investigator: Laily Ajellu
Co-PI: Paul O'Brian
Research Assistant: Bruno Ramirez Bonilla
Student Researcher: Aadi Badola, Gozde Baran
Funder: FEDDEV-SONAMI

Find them at
msfalcon.ca
aidealtechnology.ca

Based in Scarborough, Ontario, MS Falcon Tooling (MSF) specializes in precision plastic components, offering streamlined design processes and cost-effective solutions. Aideal Technology (AidT), located in Oakville, Ontario, integrates advanced AI technologies into manufacturing to enhance efficiency and quality. Together, these companies leverage their expertise to merge innovative manufacturing with AI-driven innovations, addressing industry challenges effectively. Ensuring high-quality production in high-volume manufacturing is crucial, but traditional methods involve man-ual inspection processes which are labor-intensive, prone to errors, and contribute to material waste and production delays. MSF and AidT came to George Brown to collaboratively develop an AI-powered quality assurance system to automate quality checks in MSF's injection molding process that would offer superior accuracy, speed, and scalability.

This project was an active collaboration between GBC, MSF, and AiDT to align the algorithm development against the implementation needs, and it was successful. The team was able to implement more than what the partner anticipated, enabling two AI models to make quality checks on the manufactured parts in the facility. By automating defect detection and classification, these systems reduce reliance on human inspectors, enhance accuracy, and provide real-time insights into production quality, ensuring more efficient and reliable operations. This is a quality assurance tool that not only betters the production of the parts but also reduces waste.

PROFILE

Kate Satler

Student Researcher , H119 Culinary Management and Nutrition

Can you give a brief description of the project you worked on?

Organic Traditions wanted three drink powders formulated, each with a specific flavour and function. During the development phase, the clients would come in for tastings and provided feedback on what they liked, didn't like or would like to see. Once the clients had approved on the final formulations, a sensory evaluation was held to receive anonymous public feedback on each of the three products. A report was then drafted and presented to the clients with all research and data collected.

What did you enjoy most about working on this project?

Creating a new product. While you are given guidelines and directions from the clients, there's still a need for creativity to developing products. During the development phase, there's a lot of trial and error and iterations each product needs to go through to ensure the taste is met but also the product's functionality.

What was your biggest learning or takeaway from your time working on this project?

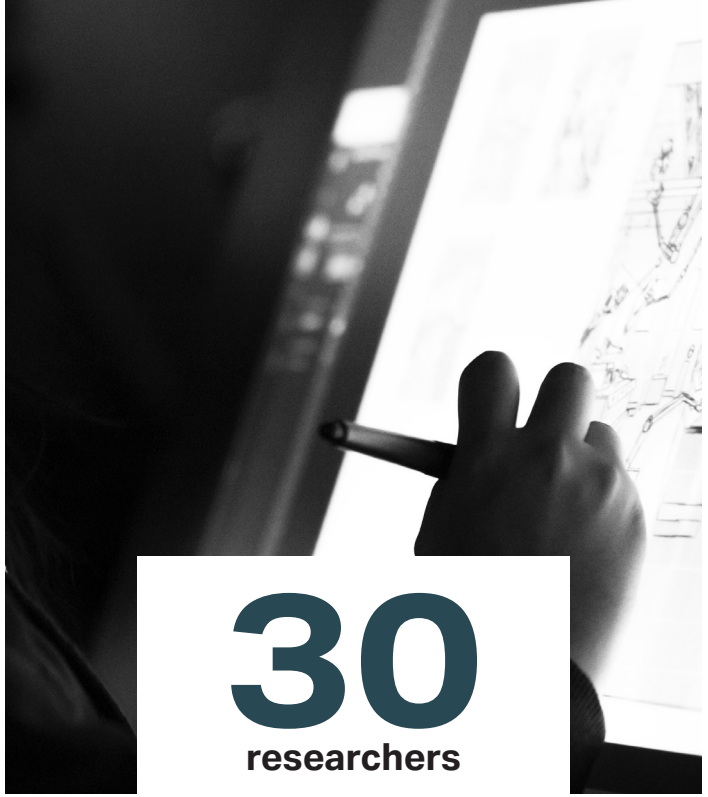
My biggest takeaway would be the importance of listening to your clients and understanding their needs and wants. During the development phase, client requirements may evolve, and it is crucial to stay on top of what they really need.

I was surprised by how small changes could have a significant impact on a product. This really emphasized the importance of testing and documentation.

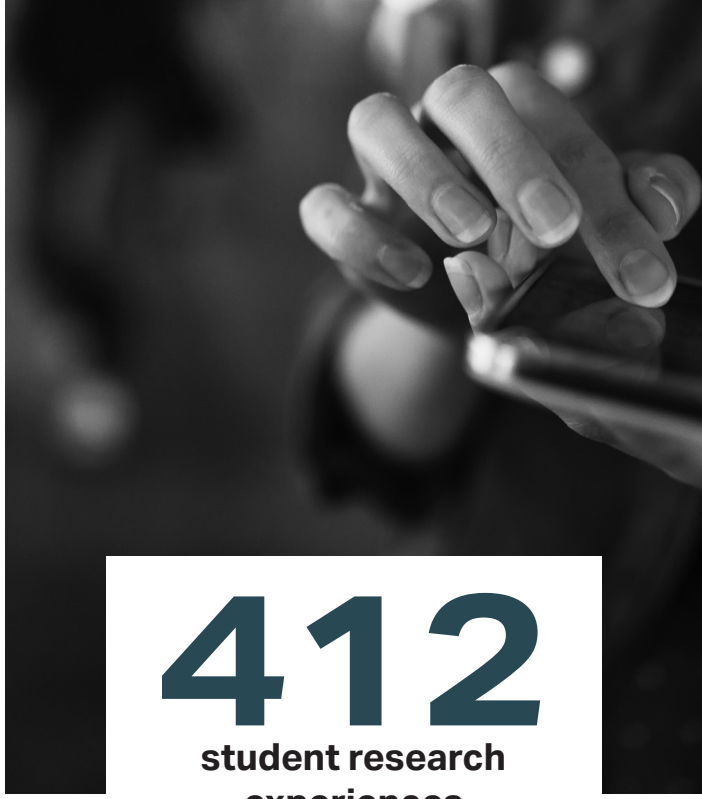
Is there anything else you would like to share about your experience?

The team at FIRSt were incredible mentors. Everyone was willing to share their knowledge, answer questions, and guide me through every step of the process. Their enthusiasm and passion for innovation made the experience so rewarding. I am very grateful to have had the chance to work with such a professional and creative team.

53
projects



30
researchers



412
student research experiences

Institute

Social Innovation

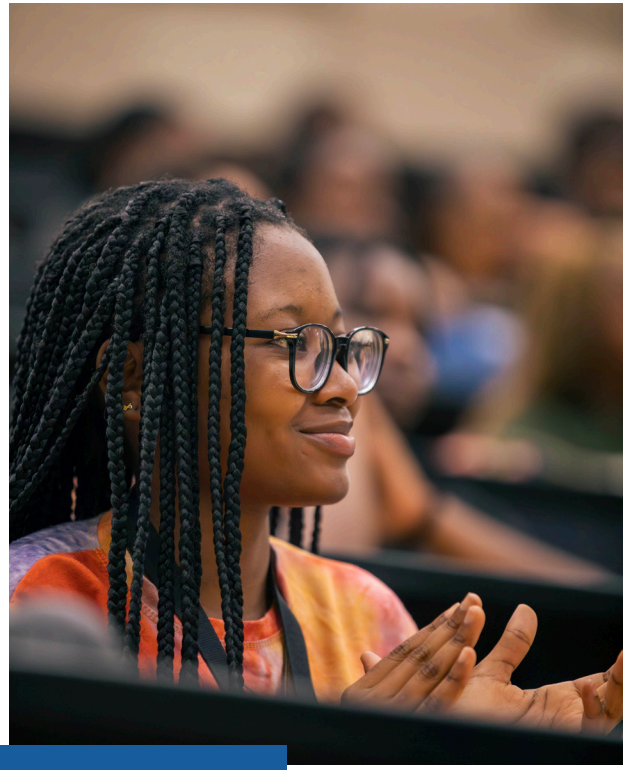
Focused on a wide range of areas including education, community development, health, and inclusion of vulnerable populations, social innovation at George Brown supports applied research projects that generate real-world impact, turning ideas into meaningful social outcomes.

Studios:

- *Community & Socioeconomic Development*
- *Black Futures Research*
- *Scholarship of Teaching and Learning*

Community & Socioeconomic Development

Connecting researchers, and community partners to co-create solutions to social challenges

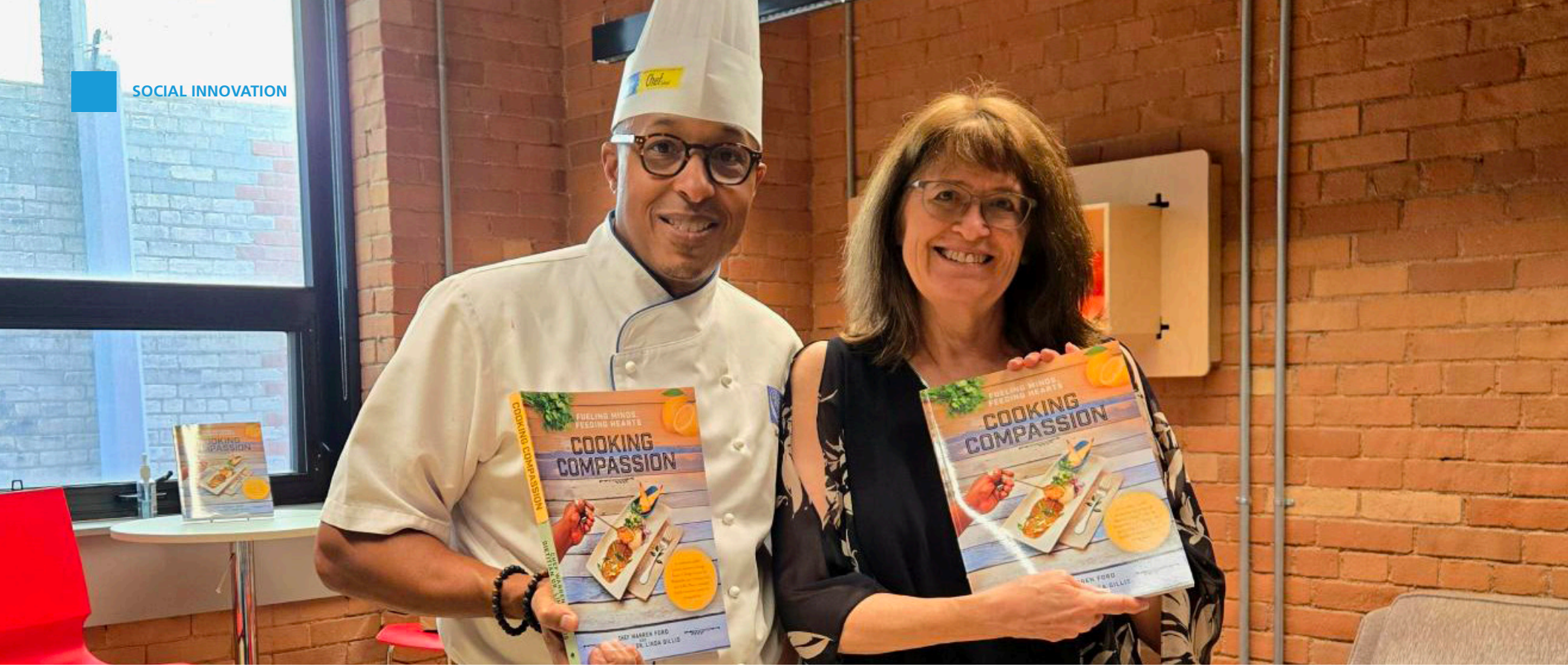


Black Futures Research

Inspiring and supporting the next wave of Black innovators, inventors and creative thinkers focused on social, economic and ecological justice

Scholarship of Teaching and Learning

Evidence-based inquiry focused on improving student learning experiences and outcomes



FEATURE

A cookbook tailor-made for youth impacted by mental illness

Stella's Place and George Brown researchers teamed up to develop a cookbook for youth and young adults with major depressive and generalized anxiety disorders

PROJECT TEAM

Principal Investigator: Linda Gillis
Student Researchers: Kate Salter, Wing Chee Chan, Aaryan Taneja
Research Assistant: Kenzie Osbourne

Young adults have the highest rates of mood disorders in Canada, with waiting lists for mental health treatment that can stretch for years. Dr. Linda Gillis, professor at the Chef School at George Brown, saw it firsthand.

"I'm a registered dietitian and I have always worked with children, young teens and young adults. It has been my area for the last 35 years. And I was seeing how they really struggled with their mental health," she says. "I was treating them for physical ailments. But mental health was such a big issue."

Then COVID-19 hit and those numbers skyrocketed, while supports and funding stayed the same or even shrank. Linda saw there was an opportunity for an innovative, evidence-based community program to fill the gap in the system.

"I know the power of nutrition," she says. "I wanted to give them something that may bring them a bit of relief while they are waiting. Nutrition can't cure depression, but it could help as one in three can have their symptoms go into remission by simply adding healthy foods into their diets. We created this book to help ease that burden and support young adults as they begin their journey towards healing."

And so, after a successful IGNITE application, the project was off and running. Formally called "The use of co-research to develop a cookbook for youth with major depressive and generalized anxiety disorders", the project partnered with Stella's Place, an organization that offers free mental health services to young adults ages 16 to 29 in Toronto, including peer support, clinical, employment, wellness and recovery programs.

Chef Warren Ford, a full-time professor and program coordinator with the Honours Bachelor of Commerce in Culinary Management degree at the Centre for Culinary and Hospitality Arts' Chef School, also joined the project.

"Food is a universal experience, something that should bring well-being and joy. But for many it's complicated and overwhelming," Linda says.

Part 1 of the cookbook begins with 12 weeks of cooking classes, designed to lead to an improvement in culinary skills, nutrient intake, and depressive and/or anxiety symptoms of young adults ages 16 to 24 years with major depressive disorder or generalized anxiety disorder. A research study, which is funded by a GBC MOBILIZE grant, is starting in the new year to test this theory. The cooking classes will be compared to traditional treatment or no treatment at Stella's Place.

"One focus group participant said to me, you know, we buy all these ingredients, we take a recipe off the Internet. The recipe fails. Now we've lost all that money and don't have any dinner," says Linda. "They wanted very simple instructions, and they wanted to know the basics. If you buy a red pepper, use half in a recipe, then what do we do with the other half?"

This culminated in the development of a tailor-made cookbook based on the feedback they received. Many existing cookbooks assume their reader already has a certain amount of cooking knowledge, which can be a real challenge for young people who are just getting started in the kitchen.

"We looked at every little thing—for instance, season with salt and pepper. What does season mean? Not everyone knows…to some people a season is winter or summer," says Linda. "Chef Ford could say a term and then I'd say, oh, wait a minute, let's define that. Because if you're not taught to cook at home or in school, then you might not know the terminology."

The cookbook is filled with calming design choices, includes ingredient lists with pictures of every food, recipes that incrementally increase in complexity, and clear, one-sentence directions throughout.

For the recipes of the cookbook, the project kept it close to home. "We actually partnered with the Chef School here at George Brown," says Linda. "Over 30 chefs put in recipes."

The project was capped off with a successful launch of the cookbook at Stella's Place facilities, including a cooking demonstration from Chef Ford, tasting of the recipes and book signing.

The book—Cooking Compassion: A guide on Fueling Your Mind and Feeding Your Heart written by Chef Warren Ford and registered dietitian, Dr. Linda Gillis—is currently available at select retailers and soon to be in GBC bookstores, with proceeds going to support mental health treatment programs for young adults.

PROFILE

Nzinga Walker

Executive Director, Stella's Place

WISDOM IN ACTION | Stella's Place offers free mental health services for young adults aged 16 to 29—a sanctuary for those caught in the liminal space between childhood and adulthood, where support too often disappears just when it's needed most.

Cooking Compassion: Fueling Minds, Feeding Hearts is the outcome of George Brown College Professors Dr. Linda Gillis and Chef Warren Ford in partnership with the young adults of Stella's Place

What is the deeper purpose of Stella's Place?

We exist because systems, however well-intentioned, often fail to see the spaces between their categories. Our mental healthcare infrastructure divides neatly into children's services and adult services—but human development doesn't honour such arbitrary boundaries.

Young adults between 16 and 29 occupy a profound threshold. They're reaching toward independence while still requiring guidance. They're no longer children, yet they're navigating challenges that demand more nuanced support than what's offered to established adults. Where do they turn? That question gave birth to Stella's Place.

What philosophy guides your work?

We're guided by a principle both ancient and radical: "Nothing about us for us without us."

While we deeply value expert knowledge, we've learned something equally important—true impact comes from responding to what young people themselves are telling us. Their lived experience is expertise. Their voices aren't just valuable; they're essential. Through co-design and peer support, we honour the wisdom that emerges from lived experience alongside professional insight.

How did the pandemic reshape your understanding of service delivery?

COVID-19 forced us into an unexpected evolution. We had built our entire model around in-person connection, believing physical presence was irreplaceable. Then, circumstances demanded we embrace technology.

But here's what the pandemic taught us: when we returned to ask our young adults what they needed, many told us virtual services had actually removed barriers. For some, the digital space felt safer, more accessible, less daunting.

We learned to hold both truths—that human connection matters deeply, and that connection takes many forms. The hybrid model we've maintained isn't a compromise; it's wisdom. It's understanding that true accessibility means meeting people where they are, however they need to be met.

You speak about deconstructing how we perceive young people's knowledge. What does that mean?

Young adults possess remarkable wisdom and capability. But we've built systems that often fail to recognize or value what they bring.

The work isn't changing young people—it's examining our own assumptions about what constitutes knowledge, about who holds expertise, about where wisdom resides. When we humble ourselves enough to truly listen, to truly collaborate, we discover capacities we might have otherwise overlooked. Traditional social services were designed for a world that no longer exists. We must evolve.

Tell us about your partnership with George Brown College on the cookbook.

Collaboration with Dr. Linda Gillis and Chef Warren Ford exemplifies what authentic partnership looks like. They understood immediately that this couldn't be experts creating something for young adults—it had to be created with them. Cooking Compassion: Fueling Minds, Feeding Hearts is the outcome of this work.

Linda sat with our Youth Advisory Committee and peer supporters as equals. The process was genuinely inclusive, centred on the wisdom of those who would ultimately use these resources. Warren worked with chefs from across cultures and backgrounds to translate those understandings into adaptable, fun recipes. That's rare. And that's how meaningful work happens.

iWhy focus on something as fundamental as cooking?

There's profound wisdom in attending to basic needs. Life skills like cooking were once passed down through families and schools—part of our collective knowledge. As these structures changed, we lost something essential.

Young adults now find themselves stepping into independence without the foundational skills that enable self-sufficiency. But there's a deeper issue at play.

Consider someone relying on a food bank. You receive what you're given—often staples like potatoes. If your knowledge is limited, you boil that potato. Then you boil another. And another. The monotony becomes its own kind of poverty.

But when you understand possibility—that this single ingredient can become mashed potatoes, scalloped potatoes, crispy fries, comforting hash browns—everything changes. It's not just about nutrition, though that matters. It's about agency, creativity, and resourcefulness. It's about turning limitations into opportunities.

Cooking is medicine. It's mathematics. It's chemistry and art. It's how we care for ourselves and, eventually, how we care for others.

What's the essential truth you want people to understand?

Independence is valuable, but interdependence is human. Growth happens not in isolation, but in relationship—to ourselves, to others, to our communities.

No one should have to navigate life's profound transitions—mental health, identity, basic survival—entirely alone. We all need witnesses. We all need support. And we all deserve to be met with dignity, exactly where we are.

PROJECT SPOTLIGHT

Learning from Indigenous Perspectives on Land-Based Learning in Canadian early years programs

This multi-year project sought to design and implement environmental inquiry strategies in Canadian early years programs to support healthy development and environmental awareness

PROJECT TEAM

Principal Investigator: Dr. Monica McGlynn-Stewart
Partners: The Learning Enrichment Foundation, Dr. Eric Jackman Institute of Child Study Laboratory School, University of Toronto, Toronto Early Learning and Child Care Services

Student Researchers: Ana-Luisa Sales, Elise Patterson, Shevaun Burrell, Sumayya Bobat, Linjie Liu, Jade Biggs, Jennifer Jewson, Dana Gulley, Kayla Ritchie, Meghan Beckwith, Taylor Rowe

Funder: NSERC College and Community Social Innovation Fund (CCSIF)

The World Health Organization and the Canadian Pediatric Society have outlined the many benefits of increased activity for children, but for many young children living in urban areas, their lived experience means less access to unstructured outdoor play and fewer opportunities to connect with nature. In Canada, little attention has been paid to the history, culture, or worldviews of the First Peoples of the land on which children play and learn.

Dr. Monica McGlynn-Stewart, Professor at the School of Early Childhood Education, wanted to lead a research program to explore the complexities of connecting young children to nature in urban areas through learning from and with Indigenous perspectives on Land-based learning with the goal of addressing the gap that exists between what is known about the health and developmental benefits of children's active engagement in environmental inquiry and the training that early years educators receive in this area. Lori Budge, member of the Wikwemikong Unceded First Nation, faculty member at George Brown, was an advisor and guide on this

The guiding themes that run throughout these activities are:

Greeting and acknowledging nature

Learning how to recognize and show gratitude for the gifts of nature

Reciprocating these gifts by giving back and caring for nature

Understanding our interdependence with non-human beings

project. This work was conducted in partnership with the Dr. Eric Jackman Institute for Child Study at the University of Toronto (UofT), the Learning Enrichment Foundation, Toronto Early Learning and Childcare Services and GBC Childcare Centres.

Early years educators often lack training in environmental inquiry and don't know how to integrate Indigenous perspectives into learning. The project aimed to develop a framework and resources for integrating environmental inquiry, including Indigenous perspectives on Land-based learning, to transform partners' existing early years' environmental inquiry programs and be made available to Canadian childcare centres, schools, and educator pre-service programs. Educators were interviewed to understand their experience as well as their overall confidence with environmental inquiry. Playgrounds were audited to see how nature-friendly they were. From there, customized plans were collaboratively developed across 10 early learning centres. Children's outdoor play and learning were observed and documented, and educators received regular opportunities to learn from Indigenous leaders and to share their learning. After a final phase of interviews was done to assess impacts, the data was developed into a framework for environmental inquiry, shared through workshops, academic articles, and an online platform.

The project focused on four key Indigenous perspectives on Land-based learning: engaging with the heart and senses, belonging, gratitude, and reciprocity. After learning about and enacting these pedagogies, educators reported increased awareness of children's emotional connections to nature and the importance of sensory engagement, while the children were observed to have developed a sense of belonging as they recognized their interconnectedness with all living beings. The findings suggest that Indigenous teachings can transform educators and children's understanding of their roles in caring for their environment and illustrates the need for integrating Indigenous perspectives in early childhood education to support holistic wellbeing and decolonize education. This project has addressed a research gap on how to implement effective environmental inquiry in urban preschool settings, and from that foundation, developed a framework to equip educators with the knowledge, tools, and strategies to support nature play and Indigenous Land-based learning.

Learn more at:
landbasedlearning.mozaik.global

13
projects

6
researchers

22
student research experiences

Institute

Sustainability

Focused on exploring how to meet the needs of the present without compromising the ability to meet the needs of future generations, encompassing a balance between environment, social and economic factors

Studios:

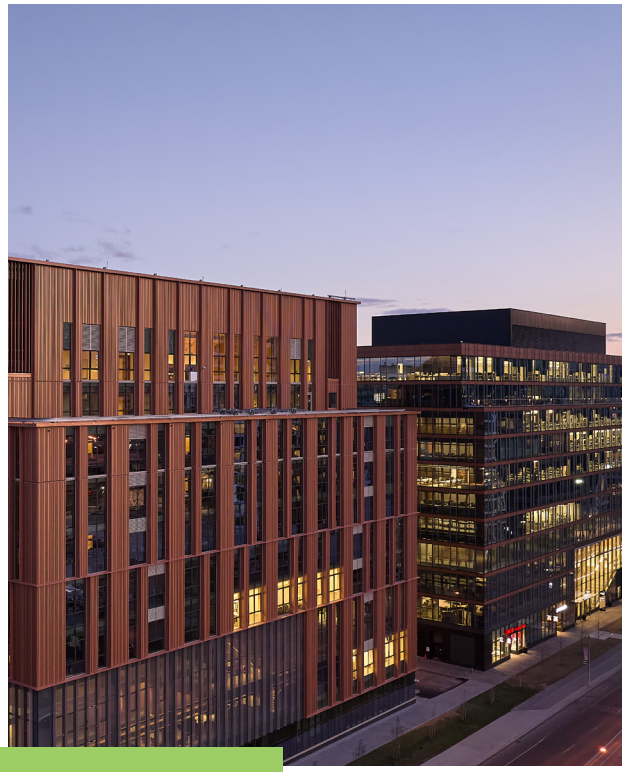
- *Experiential Design and Interactive Technologies*
- *Sustainable Food Systems*
- *Built Environment*

Experiential Design and Interactive Technologies

Creating immersive, multi-sensory hardware, software, digital platforms, environments and experiences that engage people emotionally and intellectually

Sustainable Food Systems

Exploring how to provide food security and nutrition for all while ensuring fairness, equity and preserving the health of the planet



Built Environment

Enabling innovation in human-made spaces and structures where people live, work and play

FEATURE

A new way to feed the world with Hydrocool Systems Ltd.

Hydrocool Systems Ltd. is a Toronto based CleanTech startup developing an Intelligent Zero Carbon Mobile Refrigeration System optimized for delivering food under any ambient conditions.

Find them at
hydrocool.ca

PROJECT TEAM

Principal Investigator: Matt Hexemer
Video Editor/Designer: Joseph Enaje
Research Assistant: Devi Soni

In an increasingly global food system, safely transporting goods is an industry-wide concern. Doing it more efficiently and for a lower cost? That's a game changer.

Transportation Refrigeration Units (TRUs) regulate the temperature of goods during transit, and are critical for transporting perishable or frozen foods, ensuring they reach the customer in optimal condition. Hydrocool Systems Ltd has developed a novel solution for their Transportation Refrigeration Units, which is powered by Hydrogen and enhanced by AI.

Hydrocool's innovative technology, which aims to manufacture in Ontario, promises to displace pollution-heavy diesel powered units at a lower operational cost.

"The primary objective of most of our customers is to find a way to reduce their operating cost while decarbonizing," says Pierre-Xavier Roy, COO, Co-Founder of Hydrocool.

The collaboration between Hydrocool and George Brown goes back to 2023. The company had its existing technology and wanted to integrate along with developing proprietary systems. The Hydrocool team worked with the AMP Labs to conduct literature reviews, develop CAD models, and undertake thermal analyses to define key parameters impacting performance.

"It was development on the mechanical side and more precisely on the thermodynamic side," says Pierre. "When we are speaking about refrigeration, we are speaking about the thermodynamic process. The George Brown team helped us develop an initial simulation model as well as design work on some of the mechanical features."

This year, in anticipation of seeking investment for an initial domestic manufacturing run, the company came to George Brown College to increase and enhance their digital presence. By creating a microsite, the research team aimed to give Hydrocool a digital presence that reflected their innovative and groundbreaking approach to feeding the world.

"Matt and his team helped us on the messaging, on the communication of our solution to the world, on creating a clear pitch," says Pierre. "We're a startup, so we have to pitch to customers as well as investors. They did a very good exercise mapping what they call the customer journey—interviewing stakeholders to understand what is the journey to decide to purchase one technology versus another technology."

Working closely with the company, the research team, led by Matt Hexemer, set out to design and develop a microsite that would serve as the company's digital presence. The company needed assets to illustrate and demystify the ingenuity of its signature product, the Hydrogen-Powered Transport Refrigeration Unit (H2TRU). They began by analyzing Hydrocool's business model, organizing existing digital assets, and creating engaging content to communicate the company's innovation and progress.

During the design phase, the team developed several key features for the microsite, which included a Product Showcase that illustrated the features of Hydrocool's hydrogen-powered, AI-enabled transport refrigeration units and Case Studies that gave real-world examples demonstrating the relevance and impact of Hydrocool's solution. The team also produced a 30-second promotional hype reel created from existing digital assets, highlighting three main benefits—reduced noise, lower carbon emissions, and cost savings.

"Our messaging being obviously about sustainability, about refrigeration, about cost saving, about new technology in [an industry] that hasn't seen this kind of new technology for some time," Pierre says.

The project resulted in a fully functional microsite that showcases Hydrocool's distinctive hydrogen-powered mobile refrigeration technology. In a field that is often dominated by jargon and highly technical language, the site clearly communicates the company's competitive advantages, such as its use of clean energy (in particular its hydrogen-based power source) and smart technologies, And finally, the microsite provides a centralized platform for potential investors to learn about the company's mission, progress, and partnership opportunities.

Big things are ahead for Hydrocool, with production ramping up and some exciting developments on the horizon. Another phase of the project, involving integrating AI-powered features into the unit, is hoped in the near-future as the company works on collecting data.

PROFILE

Devi Soni

Student Researcher, Design Management, Hydrocool Project

You worked on the Hydrocool project. What was exciting about it?

What drew me to this project was the company, Hydrocool, and their product itself. Hydrogen technology is so fascinating, and I did not know much about it initially. When I found out about it, I was like "that is something that is really cool and very futuristic and future focused."

For me, all the projects that I have done are somehow based in sustainability or the environment, and hydrogen is a sustainable technology and an emerging space.

What did you do on the project?

The project was about creating a micro-site for Hydrocool. A lot of it was about making the visitors or customers understand how important and new this technology is. How it is emerging and how the government and organizations are supporting, showing interest, or investing in it and that they believe in the product. So that required a lot of research into the initiatives that are already happening. So it was very research heavy in addition to the design and wireframing.

What aspect did you enjoy most about working on this project?

I would say was the workflow because it was a tight timeline. It was fun to work on a quick and fast-paced project. But even with a very tight timeline, all of the decisions were grounded in research because that is what would give trust and credibility to the audience, the customers, and whoever else is coming to the site.

What was your biggest lesson from this project?

My biggest learning was understanding the value of being proactive and also streamlining the design process because, again, it was a very fast-paced project. Seeing the team working together and being part of all the meetings, how the discussions made for effective results, and how each decision or discussion decides the path or direction of the project, was all very insightful! I gained a great understanding of product development with a product that has a real-world impact.

Do you feel the experience you gained during this research project will be helpful once you graduate?

I think it is already helping me because on this project I learned a lot about research. What I've seen on all my projects is that there's not always much time for research. Research is always the one thing were it's like "Okay, we're done with that." But you are never truly done with research in any project.

I also gained hands-on experience with how a project is managed. I was part of all the meetings from when the project started, right from scope to the execution of it. In the classroom we learn how a scope is made, or how deliverables are formed, or how a budget is made. Here I actually saw how it works – how to work with the scope we received, when to book a meeting with the client, all the communication. That theory got translated into a real-world experience.


FREEPLAY ZONE
Some heroes wear capes
FUN Deals
POD 2

FEATURE

Gameplay that teaches with S-Qubed Entertainment Inc.

S-Qubed Entertainment Inc. (SQE) is a Toronto-based studio that focuses on cross-media content.

PROJECT TEAM

Principal Investigator: Jean-Paul Amore
Research Assistants: Upamanyu Prasana Yavalkar, Mariah (Vikki) Victoria Baysic, Francisco Arbert
Student Researchers: Lizzy Mikulich, Ari Bezkrovna, Xenia Claus, Arash Hadjimokhtar
Funder: NSERC-Mobilize

How can a video game distill complex healthcare information using its interactive elements?

Inspired by science-based video games, tv shows and movies from their childhoods, brothers Nihar and Nikhil Sonalkar set out to design a creative dive into the human body, inspired partly on the COVID-19 pandemic.

"Because there was so much of disinformation, the W.H.O. COVID-19 guidelines were really helping to keep fact from fiction," says Nikhil Sonalkar, co-founder and Lead Game Designer. So they wanted to find a way to gamify them while not making light of the difficult situation happening globally. "That was also our way of trying to do something about a situation that was that felt completely out of the everyday person's hands."

The project evolved beyond these roots to become something much larger and more universal: the video game DC3: Viral Menace. But despite its unique setting as a battleground inside the human body, the real trick was finding a story worthy of an entire game narrative.

"From a narrative perspective, there's not a lot of human conflict— you can't really be mad at a virus," says Nihar Sonalkar, co-founder, Narrative Designer and interim Technical Director at SQubed. "The difficulty was finding conflict that audiences could empathize with. And that's why we honed in on the relationship between a mother and her daughter, and the lengths which parents can go to save their children. That's the core of the entire franchise, the heart that keeps it pumping."

They came to GBC's Interactive and Experiential with a complicated challenge ahead: maintaining the technical and artistic integrity of the game while providing a consistent aesthetic and experience across two distinct pillars—dynamic gameplay and engaging storytelling.

The George Brown research team, led by J.P. Amore and supported by a roster of Design students, set out to develop high-quality assets and refining gameplay mechanics; this meant creating 3D models, textures, animations, and visual effects (VFX) for a respiratory system-based game environment and designed three unique enemy characters using motion capture.

The team also developed immersive lighting to elevate the gameplay environment and a user-friendly interface to ensure seamless interaction, while improving the backend infrastructure, iterating on game components and critical bugs conducting playtesting and collecting feedback from S-Qubed for continuous refinement of the game.

Meanwhile, the S-Qubed team also worked with a team of post-graduate medical students out of McMaster University for extra realism on the game's scientific elements and biological accuracy. "Keeping things grounded in science and reality, while also we're exploring these wild narratives, has been such an exciting process," says Lizzy Mikulich, Art Director, also a graduate of the George Brown Concept Art program. "Finding that balance between the fantastical and the scientific has been such a unique challenge for all of us."

"During that first two months of project, we rehashed a majority of the game to ensure that what the game was trying to do made sense," says Nihar. The GBC research team loaned their expertise to develop key lighting elements, 3D environment mod kits, VFX, game programming, and user-interface support, all of which are critical in maintaining a consistent gameplay experience. The engaging, educational prototype faithfully preserves the comic's storyline and visual style, while enhancing it for interactive gameplay.

"It's been such a wonderful opportunity for us to be able to work on our project and tap into George Brown's talent while also giving them kind of an incubation chamber to work on their own skills," Lizzy says. "We were able to get together an incredible team of students, a handful of which stepped into leadership roles and helped us organize and oversee our large team. We feel very lucky to have qualified for a series of grants that allow us to keep many of these folks on the project while we continue development."

The result will be an immersive, throwback adventure into a microscopic world, supported by an engaging and emotional storyline and a fully playable environment designed to mimic the human body.

Find them at
squbed.ca

PROGRAM SPOTLIGHT

Empowering Innovation through Strategic IP Support

Intellectual Property & Commercialization Services

With funding from Intellectual Property Ontario (IPON) and the support of our growing network of partners and experts, GBC offers tailored services that accelerate the commercialization journey. Eligible projects may receive funding support for activities like audits, patent filings, and registration.

Through this program, we help innovators, entrepreneurs, and SMEs unlock the full potential of their intellectual property. Through our IP Commercialization Exchange, we provide end-to-end support—from identifying intangible assets to developing robust IP strategies and guiding commercialization efforts.

The businesses George Brown supports serve key sectors, including health and med tech, transformative applications of artificial intelligence (AI) across various fields, and developments in advanced manufacturing.

Equity, diversity, and inclusion (EDI) is also supported throughout George Brown IP programming and activities.

This year, we've received $295,000 in funding, with $100,000 earmarked to directly support small and medium-sized enterprises and startups.

By the Numbers | The IPON Program

11 Ontario businesses supported

45%
youth entrepreneurs

63%
Black-owned

27%
women

9%
Indigenous -owned

IP SPOTLIGHT

Helius Originals

Born during the December 2021 lockdowns, Helius Originals redefined luxury through sustainability, creating handcrafted barware from reclaimed materials. Rooted in Black and Indigenous ownership, the company transforms waste into elegant, eco-conscious smoke kits that are now used at luxury destinations including The Four Seasons and in markets across Spain, Japan, and the U.S.

To protect their innovative designs, George Brown College provided $15,820 in IPON funding and strategic support through AMP Labs. This investment ensures their products remain protected as they scale, while reinforcing their mission: making extravagance sustainable.

Helius Originals has a long-term partnership with the Office of Research through their past engagements with AMP Labs. Helius has previously worked on NSERC-funded projects including the "Design and Prototype of Eco-Innovative Barware Using Reclaimed and Recycled Materials."

PROGRAM SPOTLIGHT

Building interconnected partnerships with institutions, industry and community

Mitacs Research Internships

In 2022, George Brown became the first college in Canada to receive a Mitacs-Accelerate Umbrella award. Mitacs is a national, not-for-profit organization that provides support and funding to foster collaboration and innovation.

Mitacs-Accelerate supports collaborative research between for-profit or approved non-profit organizations, interns, and faculty supervisors at Canadian postsecondary institutions.

Under the Mitacs program, GBC offers targeted research and innovation support to local industry and community partners, rapidly increasing their capacity across a range of areas including in product design, product and process development, product and operations digitalization, and production scale-up.

This program is open to:

- Businesses and approved not-for-profit organizations operating in Canada, including select Crown corporations and student-led start-ups
- For-profit businesses outside of Canada
- All sectors and academic disciplines
- Interns: students at colleges and polytechnics, and graduate students and postdoctoral fellows at universities

By the Numbers | The MITACS Program*

Total project value: $1,725,000

22
Projects

19
Partners

115
Internships

** Metrics representing the time period of January 1, 2025 to December 1, 2025*

PROGRAM SPOTLIGHT

Your gateway to entrepreneurship at George Brown

Entrepreneurship Services

Whether you are a current student or an alumnus, startGBC is the gateway to entrepreneurship at George Brown Polytechnic. startGBC is a physical and virtual hub that connects students, alumni and the community with resources, programs and support. Their goal is to foster a culture of entrepreneurship on campus and beyond.

since 2017, startGBC has

engaged
19,935
students

facilitated
5,336
hours of 1-1 coaching

supported
573
entrepreneurs

supported
936
events

$942,620
in stipends, tickets and prize funds

2,864
newsletter subscribers

startGBC collaborates and partners with all programs at George Brown by delivering:

- *Online resources directing students to learning and funding options available across Ontario and beyond.*
- *A collaborative workspace environment to learn and develop your business idea.*
- *Guidance and advice from mentors and advisors, professional service providers, and the startGBC team.*
- *Programming and events, including the #WhyNotMe speaker series. This series features alumni entrepreneurs and The Practical Entrepreneur workshop program.*

ENTREPRENEUR SPOTLIGHT

Karen Amadi

Gropad

Karen Amadi, is a 20-year-old entrepreneur from Nigeria, now based in Canada. Her journey started with a mission to find ways to impact people's lives and offer support outside of the traditional healthcare system.

That focus took a sharp turn after a personal setback: Karen was scammed while trying to purchase an item online. That experience revealed a critical gap: there was no truly safe, exclusive marketplace or community for students on campus. Karen soon discovered a fellow student was selling the exact same item, but without a visible platform, she had no way of knowing. Karen spoke with a friend studying software engineering, and together, they realized they had to fix this problem.

That led to Gropad - a name inspired by the essential nature of a "notepad." Gropad is now a dedicated, secure platform designed to help university and college students grow connections on campus, whether they need to buy, sell, or simply connect securely.

The platform brings together everything students need in one place—from discovering campus events and accessing exclusive student deals to buying and selling items safely within their school community. Gropad also connects students to clubs, local opportunities, and helpful campus resources, making it easier to stay informed and engaged.

Gropad continues to grow as a trusted digital space for students and a valuable channel for brands and event organizers looking to reach the student audience. Gropad is developing a mobile app and advertising opportunities for businesses targeting students nationwide.

What made you want to become an entrepreneur?
I wanted to have a positive impact on lives.

Why did you create your business?
To create a safer and more connected space for students.

What successes have you enjoyed so far with building your company?
The greatest one so far is hearing students say, "I have needed this for so long."

"My number 1 advice is to never look down on yourself. You might not be the smartest in your class or have the best grades, but if you are passionate about something, you will excel no matter what."

Karen Amadi
Gropad

Celebrating the incredible career of

Dr. Eva Aboagye

Director, Research Programs
Retired in August 2025

Dr. Eva Aboagye joined the Office of Research and Innovation in 2015 and consistently demonstrated values-driven leadership rooted in community, collaboration, and impact during her time at George Brown. What began as a modest portfolio of five social innovation projects has, under her leadership, grown into a thriving ecosystem of more than 30 projects, supported by over $7 million in grant funding, involving dozens of researchers, hundreds of students, and more than 40 community and industry partners. That is not just growth, it is transformation.

In her time at George Brown, Eva was responsible for a diverse and dynamic range of research areas from advanced manufacturing and textile innovation to digital transformation and social innovation. Her leadership has been instrumental in shaping a research culture that is inclusive, forward-thinking, and deeply rooted in real-world impact.

Eva's legacy doesn't begin, or end, here. Prior to coming to George Brown, Eva held key roles that shaped institutional planning, equity, and global citizenship at other postsecondary institutions. She has taught, mentored, and inspired countless students and colleagues across the Ontario postsecondary system. She is not only a leader and a manager, she is a scholar, a teacher, and a changemaker.

Eva's work has left an indelible mark on George Brown, our communities, and all of us who have had the privilege to work alongside her. Eva's calm wisdom, strategic insight, and unwavering belief in the power of education and research to change lives and transform communities has inspired us all. As you step into this next chapter, we hope you carry with you the deep appreciation and admiration of your colleagues, your students, and your community. Thank you, Eva. You will be deeply missed, and your legacy will continue to guide us.

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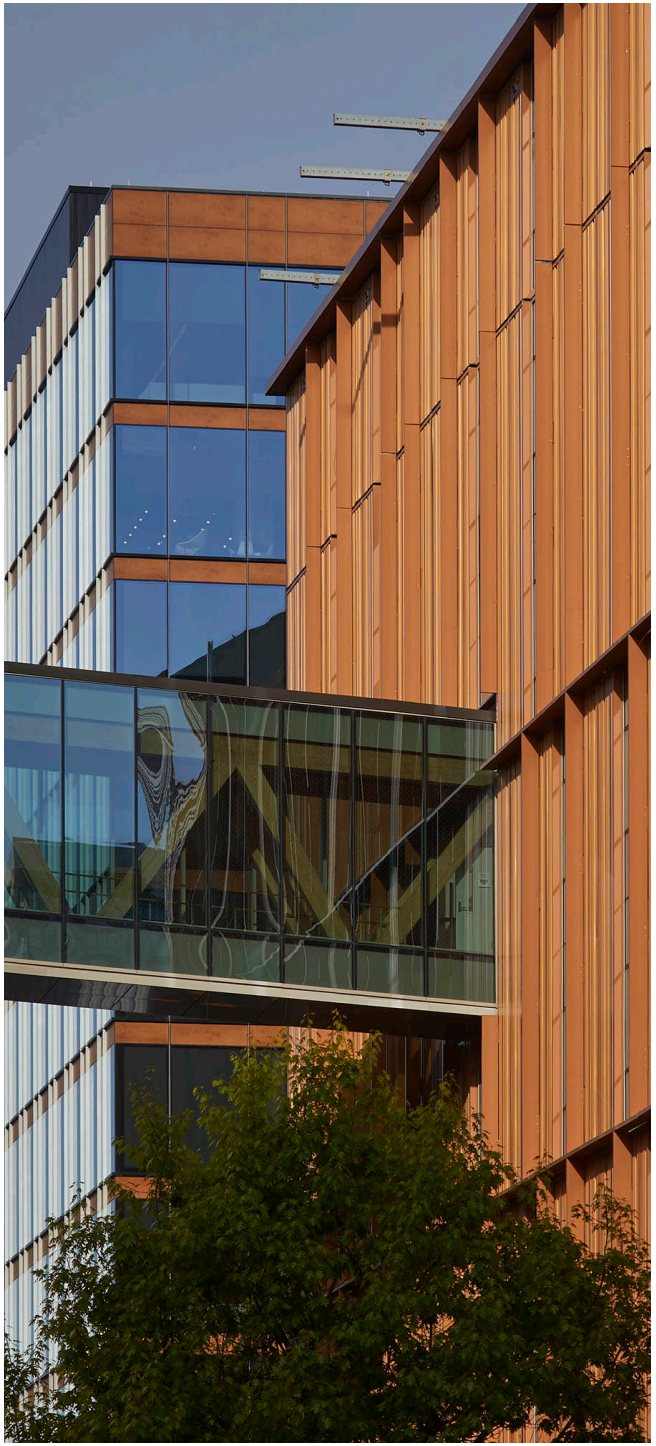

About this report

This document features some of the many George Brown Office of Research & Innovation activities that took place in 2024 and 2025. We would love your feedback!

Email us at research@georgebrown.ca

Learn more at georgebrown.ca/research

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About George Brown Polytechnic

Toronto's George Brown Polytechnic prepares innovative, adaptable graduates with the skills to thrive in a rapidly changing job market. With three campuses in the downtown core, the college blends theory with experiential learning, applied research, and entrepreneurship opportunities. George Brown offers 171 full-time programs and 200 continuing education certificates/designations across a wide variety of professions to more than 31,500 full-time students, including 27 percent international students, and receives more than 65,000 continuing education registrations annually. Students can earn certificates, diplomas, graduate certificates, apprenticeships, and degrees.

Learn more at georgebrown.ca

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