# FAST News

**MAY 2024**

## DEAN'S MESSAGE

Dear Colleagues,

As the days grow longer, we welcome the vibrant energy of spring and our students competing at Skills Ontario this month!

From May 6-8, more than 35 Humber College students will be climbing, welding, baking, landscaping, and competing in 24 categories at the 2024 Skills Ontario Competition. This event offers a unique opportunity for students to demonstrate their skills as they turn the heads of their educators, family, friends and prospective employers.

It takes a village to help our students prepare for this competition and we greatly appreciate all the coaches, educators, staff, technologists, mentors and faculty who are helping our students compete.

In this issue, we celebrate the class of 2024 who showcased their capstone projects at the ICT and Engineering Capstone Expos. These senior level projects are the culmination of our students' career at Humber College and the result of continuous development over the course of the academic year leading to this moment.

**WE ARE**
**FUTURE FOCUSED**

# FAST News

We have many more compelling stories that I look forward to you discovering on the following pages, including celebratory moments captured at the Scholarship Celebration where 23 FAST students were the recipient of 27 scholarships funded by our generous donors.

Humber College will be hosting a booth at the Skills Ontario Career Exploration Showcase at the Toronto Congress Centre on May 6th & 7th where we will be inviting guests to bring it, plunge it, climb it, plant it, bake it and game it. I hope you will join us so we can inspire the next generation of leaders and applaud our competing students!

Warm regards,
Michael Auchincloss
Associate Dean and Principal
Centre for Skilled Trades and Technology

# FAST News

## CAPSTONE EXPOS

### INFORMATION & COMMUNICATIONS TECHNOLOGY

The ICT Capstone Project Expo showcased 140 capstone projects by more than 400 students from the class of 2024. Sponsored and supervised by more than 80 industry partners, these projects by our communication technology graduates are a culmination of months of hard work and dedication as they applied real-world solutions to real-world problems.
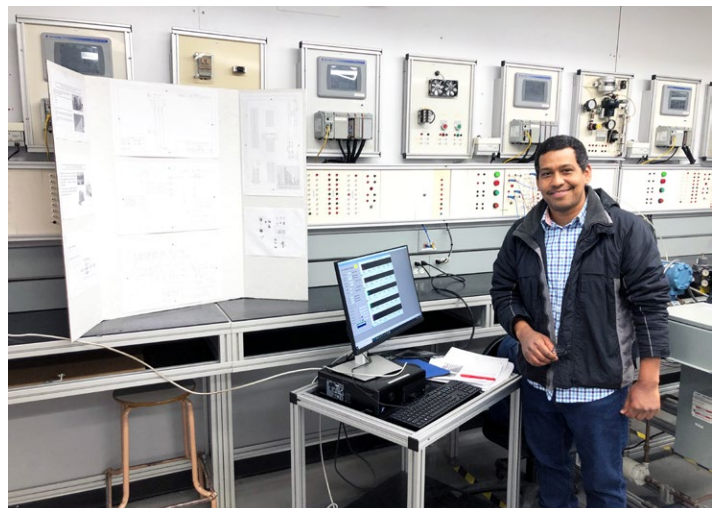
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## ENGINEERING

The Engineering Capstone Expo featured more than 50 capstone projects by 200+ first & second year engineering students and the graduating class of 2024.

Sponsored and supervised by more than 50 industry partners, the Spring 2024 Capstone Showcase highlighted projects from 10 engineering programs and spanned over three floors of the Barrett CTI and NB115.

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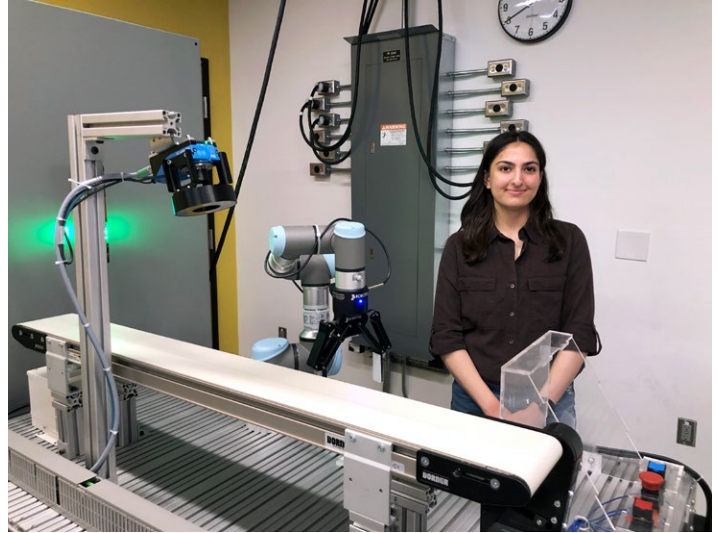
## SCHOLARSHIP CELEBRATION

The Humber College community came together to celebrate the achievements of our student scholarship recipients and recognize our generous donors for their commitment to empowering the next generation.

This year's event welcomed faculty, staff, students and donors from all six Faculties and included a panel discussion with Humber FAST students Samara Ocansey, Bachelor of Engineering, Sustainable Building Engineering (Chris Whitaker Presidential Scholarship and Riverside Natural Foods Scholarship recipient) and Miranda Isaacs, Carpentry and Renovation Technician program (Schulich Builders: Scholarships for Skilled Trades recipient). Moderated by Humber College Vice President, External Affairs and Professional Learning, Kelly Jackson, their stories highlighted how scholarships & financial support can make a difference.

Our team connected with donors including the Sura family who created the Adam Sura Arborist Apprentice Level 1 Scholarship in memory of Humber Alumni Adam Sura; and the family of the James E. Clark Award who has supported a student in the Landscape Technician program since 1980.

These donors have paved the way for student success, transforming lives & creating endless opportunities.
Thank you to all our generous donors and congratulations to all student recipients!

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## BARRETT CENTRE FOR TECHNOLOGY INNOVATION

**FIVE YEARS OF TECHNOLOGICAL INNOVATION: CELEBRATING BARRETT CTI'S PARTNERSHIP AND SUCCESS**

The Barrett CTI is celebrating its fifth anniversary, made possible by the generosity of the Barrett Family Foundation, which has guided Humber College students towards success in the advanced manufacturing sector. We are grateful for the collaborative efforts that have pushed educational and research boundaries, and we look forward to inspiring future innovators. With ongoing support, we anticipate further advancements.

Additionally, we extend our immense gratitude for the success of the event "Bridging the Gap: Uniting Skills and Industry in Mold Making and Plastic Processing," held last month. Thank you to everyone who participated and contributed to its success!

## FAST LEARNERS

### STUDENT SPOTLIGHT



**NAME:**
Justin Philip Dela Cruz

**PROGRAM OF STUDY:**
Computer System Technician

**CURRENT YEAR:**
2024 Graduating Year

**TITLE OF PROJECT:**
Humber International Visitor Tracking and Flow Prediction using Webcam

### TELL US ABOUT YOUR PROJECT?

Our project, the Humber International Face Tracking and Flow Prediction application, tackles a significant challenge faced by Humber International employees: the need to efficiently track and count people manually, especially during busy periods. With guidance from Professor Timothy Wong, Tajay and I collaborated to create an advanced face tracking system. This software utilizes computer vision, specifically OpenCV, to automatically detect and count faces, logging data to a SQL database. Additionally, it includes a user-friendly GUI for real-time metric monitoring and scheduled email reports to keep Humber International employees informed.

### WHAT WERE SOME OF THE MOST IMPORTANT THINGS YOU LEARNED?

Throughout this project, we gained invaluable insights. Firstly, we discovered the importance of teamwork and mentorship. Professor Wong's guidance was crucial, helping us navigate through the project's challenges. We encountered a significant challenge when testing the system at Humber International, as it continuously counted people and also accounted for depth. To address this, we adjusted the system to only count individuals who step into the line for Humber International. We accomplished this by refining the depth perception and implementing a signature face feature, ensuring that individuals previously counted would not be continually counted but instead registered as a single count. Secondly, we realized the importance of thinking ahead. By incorporating features like email alerts for staff to notify students of their queue status, we aimed to develop a solution that not only resolves current issues but also anticipates future ones.

### WHAT ADVICE WOULD YOU GIVE TO OTHER STUDENTS INTERESTED IN YOUR PROGRAM?

If you're interested in our program, here's some advice: don't hesitate to seek guidance and work with others. Learning from experienced folks can open new perspectives. Also, be bold in your ideas and think about how your project can grow over time. Lastly, get your hands dirty with real world projects whenever possible. That's where the best learning happens. Learning technology is a continuous journey – don't stop seeking knowledge.

## FAST PROFESSOR PUBLISHES PAPER ON ONLINE RESOURCES IN A LIBRARY

Congratulations to Professor Debashish Roy, Ph.D. for his published paper "A Hypergraph-Based Approach to Recommend Online Resources in a Library."

When users in a digital library read or browse online resources, it generates an immense amount of data. If the underlying system can recommend items, such as books and journals, to the users, it will help them to find the related items.

This research analyzes a digital library's usage data to recommend items to its users, and it uses different clustering algorithms to design the recommender system. We have used content-based clustering, including hierarchical, expectation maximization (EM), K-mean, FarthestFirst and density-based clustering algorithms, and user access pattern-based clustering, which uses a hypergraph-based approach to generate the clusters. This research shows that the recommender system designed using the hypergraph algorithm generates the most accurate recommendation model compared to those designed using the content-based clustering approaches.

Visit this link for more information.
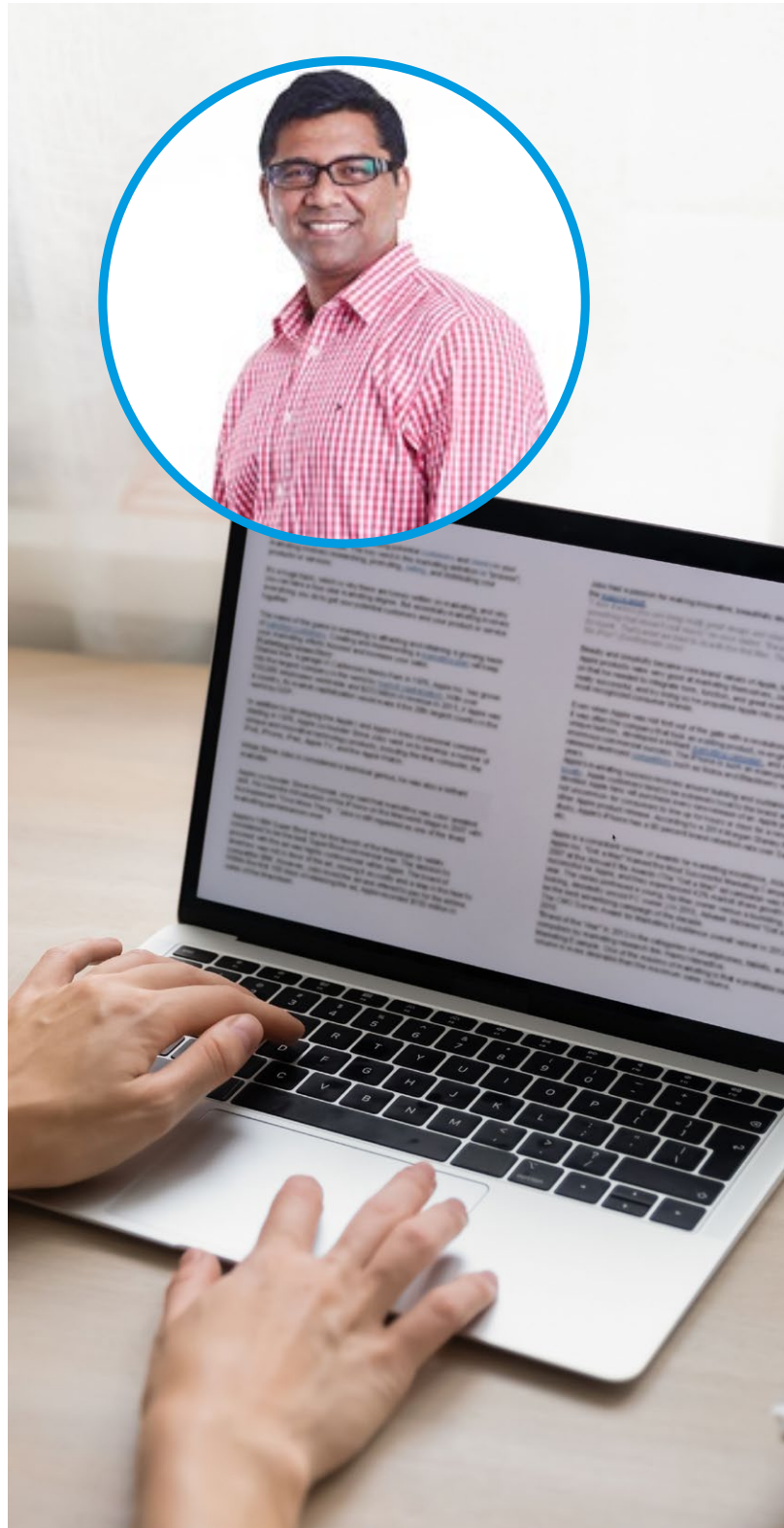
# FAST News

## FAST MILESTONES

Congratulations to the following FAST member who is celebrating a Career Milestone in May! We truly appreciate your contributions to the Humber FAST community and congratulate you on reaching this important milestone!

**1 YEAR**

Frank Spatone

# FAST News

## UPCOMING EVENTS

**May 20**
Victoria Day
Campus Closed

**WE WANT TO HEAR FROM YOU!**

FAST NEWS recognizes and celebrates the achievements of our faculty and students. To share your successes with us, please submit stories and images to the Office of the Senior Dean, Julie Pasquin: julie.pasquin@humber.ca

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