

Suraj Bansal

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EDUCATION

McMaster University, Hamilton, ON
Honours, Bachelor of Health Sciences (BHSc)

Sep. 2021 - Present
GPA: 4.00/4.00

RESEARCH PROJECTS

Accepted Manuscripts

Zeng, A.G.X., Bansal, S., Jin, L., Mitchell, A., Chen, W.C., Abbas, H.A., Chan-Seng-Yuel, M., Voisin, V., van Galen, P., Tierens, A., Cheok, M., Preudhomme, C., Dombret, H., Daver, N., Futreal, P.A., Minden, M.D., Kennedy, J.A., Wang, J.C.Y., Dick, J.E. A cellular hierarchy framework for understanding heterogeneity and predicting drug response in Acute Myeloid Leukemia. (Accepted). *Nature Medicine*. February 2022. DOI:10.1101/2022.01.25.476266

Bansal, S., Ahn, M. The efficacy of nanoparticle-based CT imaging techniques in identifying pro-inflammatory macrophages in atherosclerosis. (In Press). *The Meducator*. April 2022. DOI:10.35493/medu.41.14

RESEARCH EXPERIENCE

The Dick Lab, Princess Margaret Cancer Centre, *Student Researcher* | Toronto, ON

Sep. 2020 - Present

- Performed a literature screen, procuring 100+ drug-treated RNA-sequencing datasets and employed TMP normalization
- Performed gene expression deconvolution, dimensionality reduction, and cell clustering analysis on TCGA, BEAT-AML, and Leucegene cohorts to infer leukemic hierarchy composition and quantify changes before and after drug treatment
- Presented an academic poster at the University of Toronto Department of Medical Biophysics Summer Student Poster Day

The Grover Lab, St. Michael's Research Centre, *Research Volunteer* | Toronto, ON

Jun. 2019 - Aug. 2019

- Assisted with data entry and patient roleplays for research on the transfer of endoscopic skills with an endoscopic simulation curriculum using EndoVR (CAE Healthcare) — a high-fidelity interventional virtual reality endoscopic simulator

PERSONAL PROJECTS

Ryde AI, *Project Lead and Co-Founder* | Toronto, ON

Apr. 2020 - Nov. 2020

- Self-driving software, leveraging Bluetooth to interface vehicle diagnostics with a smartphone application for under \$1,000
- Zappos Venture Challenge Finalist, Sparkteen Accelerator Finalist, Stanford GATSVI Accelerator Finalist (fast-tracked)

Kidogo, *Project Consultant* | Nairobi, KE

Feb. 2020 - Apr. 2020

- Created an innovation plan to increase mamapreneur profits by 43% and reduce childhood malnutrition with community sensitization workshops, sack farming pilot programs, and strategic partnership contracts with Aga Khan Museum

Sidewalk Labs (Google), *Project Consultant* | Toronto, ON

Nov. 2019 - Feb. 2020

- Created an innovation plan to reduce household expenditures through a sharing economy digital infrastructure that monetizes personal assets (selected from 50 teams to present to C-suite at Sidewalk Labs headquarters)

LidLess, *Project Lead and Co-Founder* | Vancouver, BC

Jun. 2019 - Aug. 2019

- Prototyped an environmentally friendly, tri-silicone coffee lid with mobile banking integration for Vancouver-based cafés
- Placed first at the University of British Columbia SHAD Design Entrepreneurship Challenge

LEADERSHIP AND VOLUNTEERING EXPERIENCE

The Meducator, *Staff Writer & Editor* | Hamilton, ON

Sep. 2021 - Present

- Performed submission reviews for McMaster University's Peer-Reviewed Undergraduate Health Sciences Journal
- Published articles on myocarditis and mechanobiology in The Meducator's ISSUE 40

York Region District School Board Student Senate, *Prime Minister* | York Region, ON

Sep. 2018 - Jun. 2021

- Secured \$35,000 in funding and sponsorships to launch YRDSB's largest mental health conference and monthly general assemblies attended by students from 33 secondary schools (increased event attendance from 20 to 1,300 across 3 years)
- Built FACESoFYRDSB, an anonymous online platform to showcase racial discrimination stories from BIPOC students
- Launched weekly mental health symposiums on the impacts of COVID-19 adolescent mental health and wellbeing

Richmond Hill Mayor's Youth Action Committee, *Director of Logistics* | Richmond Hill, ON

Sep. 2016 - Jun. 2021

- Coordinated 35 volunteers for the conceptualization, execution, and logistics of 5 annual, city-wide events to promote community involvement for the youth of Richmond Hill, attracting nearly 300 event attendees (increased from 50)
- Managed event budget (\$10,000) and procured \$5,000 in monetary and in-kind sponsorships for community events

Frontline Connect Canada, *Head of Technology* | Ontario, CA

May. 2020 - Oct. 2020

- Created and maintained the website for Frontline Connect, which has donated 275 tablets and SIM cards to facilitate virtual communication during COVID-19 in 4 hospital systems and 63 long-term care facilities

TEDxYouth Toronto, *Student Co-Chair* | Toronto, ON

May. 2018 - Nov. 2019

- Sourced event speakers and performers, and maintained a \$15,000 sponsorship portfolio
- Implemented coordinated marketing strategies with 15 youth ambassadors, procuring 1,000+ conference applications

Baylor Scott and White Health, *Summer Shadow* | Dallas, TX

July. 2019 - Aug. 2019

- Observed clinical rounds and patient consultations in internal medicine, hematology, and emergency medicine

SELECT HONOURS AND AWARDS

Recipient (1 of 20), T-CAIREM AI in Medicine Summer Research Studentship	2022
Recipient (1 of 1), Portraits of Giving Young Adult Honouree	2022
Recipient (1 of 1), Ontario Public Schools' Association Jack A. MacDonald Award of Merit (\$500.00)	2021
Recipient (1 of 1), Ontario Student Voice Award: Entrepreneurship Category (\$1,000.00)	2021
Recipient (1 of 1), Richmond Hill Volunteer Youth Achievement Award	2021
Recipient, 5-Year Ontario Volunteer Service Award	2021
Recipient, Youth Ontario Volunteer Service Award	2021
Recipient (1 of 50), RBC Scholarship Program (\$2,500.00)	2021
Recipient (1 of 5), Benson Kearley IFG Students Making an Impact Scholarship (\$2,000.00)	2021
Recipient (1 of 5), Meridian's Commitment to Communities Student Award (\$500.00)	2021
Recipient, McMaster University President's Award (\$1,000.00)	2021
Recipient, Richmond Hill Community Recognition Certificate	2021
First Place, Sidewalk Labs Consulting Competition	2020
First Place, SHAD Design Entrepreneurship Challenge, University of British Columbia	2019

SKILLS

Languages and Libraries: Python, JavaScript, R, HTML, CSS, Keras, Tensorflow, Pandas, Scikit-learn, Survival, Scanpy