

Suraj Bansal

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EDUCATION

McMaster University, Hamilton, ON

Honours, Bachelor of Health Sciences (BHSc)

Sep. 2021 - Present

Bayview Secondary School, Richmond Hill, ON

International Baccalaureate Diploma, Ontario Secondary School Diploma

Sep. 2017 - Jun. 2021

IB: 40/45 | OSSD: 96%

RESEARCH PROJECTS

Manuscripts Under Review

Zeng, A.G.X., Bansal, S., Jin, L., Mitchell, A., Chen, W.C., Abbas, H.A., Chan-Seng-Yuel, M., Voisin, V., Cheok, M., Preudhomme, C., Dombret, H., Daver, N., Futreal, P.A., Minden M.D., Kennedy, J.A., Wang, J.C.Y., Dick, J.E. Patient-specific variation in acute myeloid leukemia hierarchy composition underlies clinical outcome and drug response.

Poster Presentations

Bansal, S., Zeng, A.G.X., Dick, J.E. Variation in stem-cell-driven hierarchy composition underlies therapeutic response in AML

RESEARCH EXPERIENCE

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

Sep. 2020 - Present

- Co-investigating a cellular hierarchy framework to characterize AML heterogeneity and facilitate therapy selection
- Performed a literature screen, procuring 100+ drug-treated, RNA-sequencing datasets and employed TPM normalization
- Performed gene expression deconvolution analysis on TCGA, BEAT-AML, and Leucegene cohorts to infer leukemic hierarchy composition and employed dimensionality reduction with UMAP and cell clustering using the Leiden algorithm to quantify hierarchy composition changes before and after drug treatment

Department of Medical Biophysics, University of Toronto, *Summer Student* | Toronto, ON

May. 2021 - Aug. 2021

- Attended weekly seminars on interdisciplinary biological, medical, and cancer research
- Presented an academic poster to MBP faculty and upper-year graduate students

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

Jun. 2019 - Aug. 2019

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

STARTUP VENTURES

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)

LidLess, *Co-Founder* | Vancouver, BC

Jul. 2019 - Aug. 2019

- Prototyped an environmentally friendly, tri-silicone coffee lid with mobile banking integration for Vancouver-based cafés

CONSULTING PROJECTS

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), *Quayside 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)

LEADERSHIP AND VOLUNTEERING EXPERIENCE

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 online platform to showcase racial discrimination stories from Indigenous and BIPOC students
- Launched weekly mental health symposiums on the impacts of COVID-19 adolescent mental health and wellbeing
- Coordinated the Student Trustee elections and helped introduce YRDSB's first Indigenous Student Trustee

LEADERSHIP AND VOLUNTEERING EXPERIENCE

- Richmond Hill Mayor's Youth Action Committee, *Director of Logistics*** | Richmond Hill, ON *Sep. 2016 - Jun. 2021*
- Coordinated an internal team of 35 members for the conceptualization and execution of 5 annual, city-wide events to promote community involvement for the youth of Richmond Hill, attracting nearly 300 event attendees
 - Created event created event itineraries, and sponsorship materials, collecting total of \$1,500 in donations
- Frontline Connect Canada, *Head of Technology*** | Ontario, CA *May. 2020 - Oct. 2020*
- Created the website for a physician-led COVID-19 grassroots organization dedicated to enhancing virtual communication between patients, families, and healthcare workers to tackle COVID-19 no-visitor policies
 - Collaborated with industry experts, healthcare providers, and Conquer COVID-19 to source 275 donated tablets and SIM cards to facilitate virtual communication during COVID-19 in 4 hospital systems and 63 long-term care facilities
- Baylor Scott and White Health, *Summer Shadow*** | Dallas, TX *July. 2019 - Aug. 2019*
- Shadowed physician rounds working in fields of trauma, hematology, and internal medicine in both the hospital and out-patient clinic environment at Texas' largest healthcare system, located in Downtown Dallas
- TEDxYouth Toronto, *Student Co-Chair*** | Toronto, ON *May. 2018 - Nov. 2019*
- Sourced speakers (Olympic medalists, world performers, Shark Tank Investors, MasterChef Champions) and sponsorships (Western, RBC, Shopify, UofT), procuring \$15,000, and coordinated marketing strategies, procuring 1,000+ applications
- Ignite Fair (Pledges for Change), *Director of Sponsorships*** | Toronto, ON *Mar. 2018 - Mar. 2019*
- Maintained sponsorship portfolio of \$5,000 for annual volunteer fair procuring 1,500 attendees
- First Nations High Five Initiative, *Director and Founder*** | York Region, ON *Sep. 2016 - Sep. 2017*
- Coordinated internal volunteer team of 50 students to launch community-wide fundraisers, collecting \$4,500 in school supplies donations for the Nibinamik (Summer Beaver) First Nations Reserve in Thunder Bay, Ontario
- Karnataka Centre for Developmental Disabilities, *Teaching Assistant*** | Bangalore, IN *June 2017 - July. 2017*
- Developed computational literacy and English curriculums and assisted with teaching in a classroom setting of 20 students while volunteering 1-on-1 mentorship sessions during after-school hours
 - Created 100-slide interactive life skills PowerPoint series and mental health resource package for students

SELECT HONOURS AND AWARDS

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, NumPy, Scanpy