

# Ram Ahuja

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## EDUCATION

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### York University

*Bachelor of Science, Honours in Biomedical Science - GPA: 4.0*

Toronto, ON

Sep. 2020 – April 2024

### University of Ottawa

*Doctor of Medicine (MD)*

Ottawa, ON

Sep. 2024 – April 2028

## RESEARCH EXPERIENCES

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### Undergraduate Research Assistant in Vital-Kolab

Sep. 2022 – Present

*York University*

*Toronto, ON*

- Researches visual neuroscience under Dr. Kar, focusing on employing neurophysiological and computational-driven hypothesis testing to advance computer vision models and guide understanding of memory formation
- Collaborates with researchers at YorkU, Google Brain and MIT to compare fMRI, behavioural and electrophysiological data recorded from the ventral pathways from primates to AI models
- Designs visual perception tasks on Amazon Mechanical Turk with JavaScript expertise and apply Python programming skills for analyzing AI models and conducting statistical tests

### Undergraduate Research Assistant in KHERG

May 2023 – Present

*University of Toronto - Toronto General Hospital*

*Toronto, ON*

- Engages in research to advance comprehension of the socio-cultural factors affecting health status of racial and ethnic minorities, with a focus on the relationship between immigrant status and kidney transplant awareness
- Proficiency in on-site and remote patient recruitment, analyzing patient data, conducting statistical analysis with STATA, and presenting findings at professional conferences
- Awarded Undergraduate Research Opportunity Awards from the Institute of Medical Sciences for summer research placement (SURP) under the supervision of Dr. Istvan Mucsi

### STEM Research Student

Oct. 2020 – Aug. 2023

*York University*

*Toronto, ON*

- Investigated gene expression differences in immune system regulatory proteins across genome-wide studies about arthritis, lymphoma and leukemia using R and Excel; presented findings at university-wide competition and advanced to the national level under the guidance of Dr. Abdul-Sater
- Analyzed the correlation between lake ice data and global warming through Excel analysis to attain an in-depth understanding of climate change; presented at university-wide research competition and achieved 2nd place

### Research Assistant

Aug. 2020 – May 2023

*Memorial Sloan Kettering Cancer Center*

*New York City, NY*

- Examined the impact of the COVID-19 pandemic on pathology resident training and the shift in sign-out practices of American and Canadian residents by developing, revising and distributing surveys under the supervision of Dr. Chahar
- Obtained experience in research paper writing and effectively incorporated feedback from peer reviewers, enhancing the quality and precision of academic literature

### Undergraduate Research Assistant in Pearlman Lab

Sep. 2021 – Aug. 2022

*York University*

*Toronto, ON*

- Collaborated with faculty to analyze meiosis in protists by studying genomic similarities using a variety of tools from NCBI, InParanoid and EggNOG 5 under the guidance of Dr. Pearlman
- Developed a program that automates ortholog comparison tasks, expediting workflow and increasing efficiency

## ACADEMIC PRODUCTIVITY

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### Manuscripts and publications

- Chahar S, Choudhary L, **Ahuja R**, *et al.* (June 26, 2023) *Impact of COVID-19 Pandemic on Pathology Residents/Trainees in North America: A Survey-Based Study*. Cureus 15(6).doi:10.7759/cureus.40967 (Published)

## Conference presentations and abstracts

- **Ahuja R** & Mucsi I. (August 2023) *Knowledge About Living-Donor Kidney Transplant Among South Asian Patients With Kidney Failure: Association with Immigrant Status*. Student Undergraduate Research Program Research Day Podium Presentation. University of Toronto, Toronto, ON (Presented)
- **Ahuja R**, Seif R, Adewumi O, *et al.* (August 2023) *Tumor Necrosis Factor Receptor-Associated Factor and Protein Kinase N expression levels in Arthritis, Lymphoma and Leukaemia*. STEM Indiciu National Conference. (Presented)
- **Ahuja R** & Kar K. (May 2024) *Comparing artificial neural network models with varied objectives to probe the role of sensory representation in primate visual memorability*. Vision Sciences Society. St. Pete Beach, FL (Presented)
- Ghazi W, **Ahuja R**, *et al.* (October 2022) *Physical function impairment among patients on dialysis and kidney transplant recipients*. International Society for Quality-of-Life Research (ISOQOL) Annual Conference. (Presented)

## In preparation

- Ahuja R & Kar K. (May 2024) *Constraining vision models to predict image memorability yields significant gains in producing more brain-aligned models of the primate ventral stream*. Cognitive Computational Neuroscience. Boston, MA (Accepted)
- Transplant Decision Making Concerns for Asian Patients With End-Stage Kidney Disease (In preparation)
- Constraining vision models to predict image memorability yields significant gains in producing more brain-aligned models of the primate ventral stream (In preparation)

## EMPLOYMENT

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### Supplemental Instruction Leader

Sep. 2022 – Present

York University

Toronto, ON

- Facilitates study sessions for 5-15 second-year students by establishing a productive environment that promotes active learning through engaging group activities
- Tailors lesson plans to the needs of each student by clarifying concepts and providing additional resources

### Academic Peer Support Assistant

June 2023 – Aug. 2023

York University

Toronto, ON

- Assisted in familiarizing new students with university processes, support systems, and opportunities
- Guided students in choosing relevant courses and planning their academic timetables

### Private Tutor

July 2020 – Aug. 2022

Self-Employed

Toronto, ON

- Educated high school students in science, math and computer courses, adapting educational techniques to optimize their unique strengths and offering constructive feedback for further improvement
- Collaborated with students to create personalized study schedules and provided effective study techniques and test-taking strategies to assist them in accomplishing their academic goals

### Customer Service Representative

Nov. 2021 – Dec. 2021

Liquor Control Board of Ontario (LCBO)

Vaughan, ON

- Safely served customers as a cashier, following underage and intoxication protocols
- Helped find products for customers and stock shelves.

## VOLUNTEER WORK, INTERNSHIPS, AND EXTRACURRICULAR ACTIVITIES

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### Hospital Volunteer - ICU/Support/Long-term Care

Sep. 2018 – Present

Cortellucci Vaughan Hospital

Vaughan, ON

- Improves patient experience by advocating medical, cultural and emotional needs to staff, ensuring patient safety during discharges, and comforting grieving family members in the ICU
- Fosters a positive environment at the long-term care center by enthusiastically engaging in activities with residents

### Student Volunteer in KHERG

Jan. 2021 – Present

Toronto General Hospital

Toronto, ON

- Established community partnerships and created multilingual kidney health content to diminish ethno-racial barriers to organ transplant amongst the Canadian South Asian population
- Under the supervision of Dr. Mucsi, developed educational material for a symptom care website that assists patients with chronic diseases in managing the physical and mental stressors of their illness
- Conducted ethnographic research and wrote reports on cultural perspectives toward kidney transplantation

**Student Volunteer in Caribbean African Regenerative Medicine Project** Feb. 2022 – Present  
*University Health Network* *Toronto, ON*

- Strives for health equity by fostering trusting relationships between African, Caribbean and Black communities and medical professionals
- Organizes workshops to inform community members about regenerative medicine and educate clinicians and researchers about cultural perspectives

**Science Lead of Robotic Club's Rover Team** Oct. 2022 – Present  
*York University* *Toronto, ON*

- Leads the Science Team in developing the science components and lab protocol responsible for performing life detection in soil samples on the rover
- Organizes multiple weekly meetings, delegates tasks, manages finances and embeds the team's work with a larger interdisciplinary group to succeed at international competitions

**President & Founder of KHERG YorkU Chapter** July 2022 – Present  
*York University* *Toronto, ON*

- Founded the club in collaboration with the research group at UHN to educate students about kidney health
- Facilitates outreach events, social media campaigns and club partnerships to spread awareness of kidney transplants and advocate for healthcare equity for ethno-racial minorities

## TECHNICAL SKILLS

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**Programming Languages:** Python, JavaScript, HTML/CSS, R, & STATA

**Lab Procedures:** Microscopy, PCR, Gel Electrophoresis, Cell Culturing, & Spectrophotometry

## AWARDS

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| • Member of the President's Honour Roll & Dean's Honour Roll, York University | 2021-Present |
| • Schneider Electric Canada Inc. Scholarship                                  | 2020-Present |
| • Entrance and Continuing Education Scholarships, York University             | 2020-Present |
| • OSOTF Science Award (Highest Faculty GPA), York University                  | 2023-Present |
| • Undergraduate Travel Award, Vision Sciences Society                         | 2024         |
| • NSERC Undergraduate Student Research Awards, York University                | 2024-Present |