

# DHRUV VERMA

Department of Computer Science, University of Toronto  
40 St. George St, Toronto, ON, Canada

 [www.dhruv-verma.com](http://www.dhruv-verma.com)

 [dhruvverma@cs.toronto.edu](mailto:dhruvverma@cs.toronto.edu)

 [Dhruv Verma - Profile](#)

---

## RESEARCH INTERESTS

HCI, Ubiquitous Computing, Sensing, Mobile Health, Novel Interactions, Neural Interfaces

## EDUCATION

**University of Toronto** | Toronto, Canada 2021 - Present  
Ph.D. in Computer Science - Advisor: [Alex Mariakakis](#)

**Indraprastha Institute of Information Technology Delhi** | New Delhi, India 2017 - 2021  
B.Tech in Computer Science & Engineering

## PEER-REVIEWED PUBLICATIONS

4. Vimal Mollyn, Karan Ahuja, **Dhruv Verma**, Chris Harrison, and Mayank Goel. 2022. Under submission at the *Proceedings of the ACM on Interactive Mobile Wearable & Ubiquitous Technologies (IMWUT'22)*.
3. **Dhruv Verma**, Sejal Bhalla, Dhruv Sahnan, Jainendra Shukla, and Aman Parnami. 2021. ExpressEar: Sensing Fine-Grained Facial Expressions with Earables. *In Proceedings of the ACM on Interactive Mobile Wearable & Ubiquitous Technologies (IMWUT'21)*. <https://doi.org/10.1145/3478085>
2. **Dhruv Verma**, Kshitij Gulati, Vasu Goel, and Rajiv Ratn Shah. 2020. Fashionist: Personalising Outfit Recommendation for Cold-Start Scenarios. *In Proceedings on the 28th ACM International Conference on Multimedia (MM'20)*. <https://doi.org/10.1145/3394171.3414446>
1. **Dhruv Verma**, Kshitij Gulati, and Rajiv Ratn Shah. 2020. Addressing the Cold-Start Problem in Outfit Recommendation Using Visual Preference Modelling. *In Proceedings of the IEEE International Conference on Multimedia Big Data (BigMM'20)*. <https://doi.org/10.1109/BigMM50055.2020.00043>

## RESEARCH EXPERIENCE

**Graduate Research Assistant | University of Toronto** Sept. 2021 - Present

- Computational Health and Interaction (CHAI) Lab, Advised by Dr. [Alex Mariakakis](#)
- Leading a project on making ocular assessments more accessible using smartphone cameras and passive components (e.g., lenses).

## Visiting Student Researcher | Carnegie Mellon University

- Smart Sensing for Humans (SMASH) Lab, Advised by Dr. [Mayank Goel](#)
- Worked on a novel privacy-preserving activity recognition system.

June 2020 -  
May 2021

## Undergraduate Research Assistant | IIIT Delhi

- Weave Lab & HMI Lab, Advised by Dr. [Aman Parnami](#) & Dr. [Jainendra Shukla](#)
- Created a novel facial expression recognition system leveraging motion sensing on wireless earbuds. Work accepted to ACM UbiComp 2021
- Built a novel framework for integrating human affect & cognitive states in context-aware applications.

Dec. 2018 -  
May 2021

## SKILLS

<b>Programming Languages</b>	Python, Java, C++, SQL
<b>Frameworks and Tools</b>	Keras, Scikit-learn, Pandas, NumPy, Matplotlib, Plotly, Librosa, Android Studio, Arduino, Processing, PsychoPy, LaTeX
<b>Sensing Technologies</b>	IMUs, Microphones, EEG, Cameras
<b>Design Skills</b>	Wireframing, Task Analysis, Storyboarding, Graphic Design (Adobe Photoshop, Illustrator, After Effects)

## AWARDS & HONORS

**Mitacs Globalink Research Internship Award** Summer 2020

## ACADEMIC SERVICE

<b>Feature Editor</b> , ACM XRDS (formerly Crossroads) Magazine	2021 - Present
<b>Reviewer</b> , ACM IMWUT	2021, 2022
<b>Student Volunteer</b> , ACM UbiComp/ISWC	2020, 2021
<b>Student Volunteer</b> , ACM UIST	2020

## TEACHING EXPERIENCE

<b>Teaching Assistant, University of Toronto</b>   The Design of Interactive Computational Media	Winter 2022
<b>Teaching Assistant, University of Toronto</b>   Introduction to Image Understanding	Fall 2021
<b>Teaching Assistant, IIIT Delhi</b>   Privacy and Security in Online Social Media	Winter 2021
<b>Teaching Assistant, IIIT Delhi</b>   Prototyping Interactive Systems	Fall 2019

## VOLUNTEERING & OUTREACH

<b>Mentor - Pursue STEM   University of Toronto</b>	Sept. 2021 - Present
- Co-mentoring (along with Dr. <a href="#">Paul Dietz</a> ) a team of two 11 grade students from the Black community, working on a "smart refillable water bottle". The team is preparing a prototype for the Canadian Black Scientist Network Science Fair 2022.	

## REFERENCES

**Alex Mariakakis** (Assistant Professor, University of Toronto)

**Aman Parnami** (Assistant Professor, IIT Delhi)

**Jainendra Shukla** (Assistant Professor, IIT Delhi)

**Mayank Goel** (Assistant Professor, Carnegie Mellon University)

*- Last updated: Mar. 1, 2022 -*