DHRUV VERMA

Department of Computer Science, University of Toronto
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RESEARCH INTERESTS

HCI, Ubiquitous Computing, Sensing, Mobile Health, 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

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 — June 2020 - May 2021
- Smart Sensing for Humans (SMASH) Lab, Advised by Dr. Mayank Goel
- Worked on a novel privacy-preserving activity recognition system.

Undergraduate Research Assistant | IIIT Delhi Dec. 2018 - May 2021

- 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.

SKILLS

Programming Languages	Python, Java, C++, SQL
Frameworks and Tools	Keras, Scikit-learn, Pandas, NumPy, Matplotlib, Plotly, Librosa, Google API, Twitter API, Android Studio, Arduino, Processing, PsychoPy, LaTeX
Design Skills	Wireframing, Task Analysis, Storyboarding, Graphic Design (Adobe Photoshop, Illustrator, After Effects)

AWARDS & HONORS

Mitacs Globalink Research Internship Award Summer 2020

ACADEMIC SERVICE

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

TEACHING EXPERIENCE

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

REFERENCES

Alex Mariakakis (Assistant Professor, University of Toronto)
Aman Parnami (Assistant Professor, IIIT Delhi)
Jainendra Shukla (Assistant Professor, IIIT Delhi)
Mayank Goel (Assistant Professor, Carnegie Mellon University)

- Last updated: Jan. 9, 2022 -