

EDUCATION

Carnegie Mellon University 5th year Ph.D., Human-Computer Interaction Advisor: Dr. Mayank Goel	Pittsburgh, PA Aug 2015–Present
Georgia Institute of Technology M.S., Human-Computer Interaction, GPA: 4.0/4.0 Advisors: Dr. Gregory Abowd, Dr. Rosa Arriaga	Atlanta, GA May 2015
IIT-Delhi B.Tech, Computer Science & Engineering (Honors), GPA: 8.64/10 Advisor: Dr. Shishir Nagaraja	Delhi, India May 2013

AWARDS & HONORS

Best Paper Award, ACM CHI (2020)
Presidential Fellowship, Carnegie Mellon University (2016)
Top 3, Student Design Competition, ACM CHI 2015 (3 out of 65)
Nominee (Top 3), Best Undergrad Thesis (2013)
IIT-Delhi Honors (2009–2013)

PUBLICATIONS

Peer Reviewed

- [10] **Rushil Khurana** & Steve Hodges. 2020. Beyond the Prototype: Understanding the Challenge of Scaling Hardware Device Production. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (CHI '20). ACM. **Best Paper Award**.
- [9] **Rushil Khurana** & Mayank Goel. 2020. Eyes on the Road: Detecting Phone Usage by Drivers Using On-Device Cameras. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (CHI '20). ACM. [Acceptance Rate: 24.3%]
- [8] Abdelkareem Bedri, Diana Li, **Rushil Khurana**, Kunal Bhuwalka, & Mayank Goel. 2020. FitByte: Automatic Diet Monitoring in Unconstrained Situations Using Multimodal Sensing on Eyeglasses. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (CHI '20). ACM. [Acceptance Rate: 24.3%]
- [7] **Rushil Khurana**, Mayank Goel & Kent Lyons. 2019. Detachable Smartwatch: More than a Wearable. In *Proceedings of Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT) 2019*. (UbiComp '19). ACM.
- [6] **Rushil Khurana**, Karan Ahuja, Zac Yu, Chris Harrison & Mayank Goel. 2018. GymCam: Real-Time Multi-Location Exercise Recognition and Analytics. In *Proceedings of Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT) 2018*. (UbiComp '19). ACM.
- [5] **Rushil Khurana**, Nikola Banovic & Kent Lyons. 2018. In Only 3 Minutes: Perceived Exertion Limits Of Smartwatch Use. In *Proceedings of the 2018 International Symposium on Wearable Computers*. ACM.

[4] **Rushil Khurana**, Duncan Mclsaac, Elliot Lockerman, & Jennifer Mankoff. 2018. Nonvisual Interaction Techniques at the Keyboard Surface. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems* (CHI '18). ACM. [Acceptance Rate: 26%]

[3] Joanne Locascio, **Rushil Khurana**, Yan He, & Jofish Kaye. 2016. Utilizing Employees as Usability Participants: Exploring When and When Not to Leverage Your Coworkers. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* (CHI '16). ACM. [Acceptance Rate: 22%]

[2] **Rushil Khurana**, Elena Marinelli, Tulika Saraf, & Shan Li. 2014. NeckGraffe: a postural awareness system. In *CHI '14 Extended Abstracts on Human Factors in Computing Systems* (CHI EA '14). ACM. [Acceptance Rate: 18.4%]

[1] **Rushil Khurana**, & Shishir Nagaraja. 2013. Simple defences against vibration-based keystroke fingerprinting attacks. In *Security Protocols XXI*.

Book Chapters & Invited Articles

[2] **Rushil Khurana**. The Past, the Present, and the Future of Fitness Tracking. In *XRDS: Crossroads*. ACM. 2019

[1] Mark S. Baldwin, **Rushil Khurana**, Duncan Mclsaac, Yuqian Sun, Tracy Tran, Xiaoyi Zhang, James Fogarty, Gillian R. Hayes, & Jennifer Mankoff. Tangible Interfaces. In *Web Accessibility*. Springer. 2019.

Other Publications

[3] **Rushil Khurana**, Yi Han, & Rosa Arriaga. 2014. SMSpress: An SMS research management system. In *Mobile Computing, Applications and Services (MobiCASE), 2014 6th International Conference*.

[2] Kuldeep Yadav, Anshu Malhotra, Ponnurangam Kumaraguru, **Rushil Khurana** & Dipesh Kumar Singh. 2012. Take control over your SMSes: A real-world evaluation of a mobile-based spam sms filtering system. IIITDTR-2012-007.

[1] **Rushil Khurana**, Sanchit Sharma, Apurv Mehra, Daksha Yadav, Vinayak Naik & Amarjeet Singh. 2012. Jiah: Healthcare Goes Mobile. In *Proceedings of M4D 2012*.

[3] **Rushil Khurana** & Abdelkareem Bedri. CopyCat: Crowd-Enabled Electrical Muscle Stimulation (EMS) For Skill Transference. In *UIST '16 SIC Demos*.

[2] **Rushil Khurana** & Paul Lazarus. SeeThrough: An Indoor Navigation Assistant For Visually Impaired Individuals. In *UIST '14 SIC Demos*.

[1] Kuldeep Yadav, Vibhas Kumar, Shrey Jairath, **Rushil Khurana**, Vinayak Naik & Amarjeet Singh. 2012. Poster: cloud-enabled content search and sharing system for mobile phones (MobiShare). In *MobiSys'12*.

WORK EXPERIENCE

- Carnegie Mellon University**
Graduate Student Researcher
Mentors: Dr. Mayank Goel, Dr. Jennifer Mankoff
Building novel sensing and interaction techniques for smart environments and devices.
Pittsburgh, PA
August 2015–Present
- Microsoft Research**
Research Intern
Mentor: Dr. Steve Hodges
Worked on identifying challenges in scaling up hardware production.
Cambridge, UK
Summer 2019
- Disney Research**
Research Intern
Mentors: Dr. Jack Yang, Dr. Alanson Sample
Explored computer vision, machine learning and RF methods for smart environment applications.
Los Angeles, CA
Summer 2018
- Technicolor Research**
Research Intern
Mentor: Dr. Kent Lyons
Explored novel around-watch interactions to improve the expressivity of smartwatches.
Los Altos, CA
Summer 2016
- Intelos Inc.**
Research & Development Intern
Mentors: Akhil Kuduvalli, Jeff Carnegie
Worked on several product prototypes to reimagine artificial intelligence with an understanding of nature of consciousness.
San Francisco, CA
Summer 2015
- Georgia Institute of Technology**
Graduate Student Researcher
Mentors: Dr. Gregory Abowd, Dr. Rosa Arriaga & Dr. Daniel Haynes
Worked on several projects in the space of health monitoring, and interaction techniques. Some of the works resulted in publication.
Atlanta, GA
Jan 2014–May 2015
- Yahoo! Inc.**
Research Intern
Mentor: Dr. Joanne Locascio
Conducted experiments to quantify the difference in results when co-workers are used as usability test participants.
Sunnyvale, CA
Summer 2014

ACADEMIC SERVICE

Program Committee, Associate Chair (AC), ACM CHI 2020 Late Breaking Work
PhD Faculty Representative, 2019-20, Carnegie Mellon University, HCII
Session Chair, ACM CHI 2018, Technology to Support Deaf and Hard of Hearing People
Reviewer (50+ Papers): ACM CHI `17 `19 `20, ACM Ubicomp `19 `20, ACM UIST `19, ACM MobileHCI `19 `20, ACM DIS `20, ACM ICMI `19, ACM ISWC `18.

TEACHING EXPERIENCE

Teaching Assistant , Carnegie Mellon University <i>Programming Usable Interfaces</i> (Graduate)	Pittsburgh, PA Fall 2019
Teaching Assistant , Carnegie Mellon University <i>User Centered Research and Evaluation</i> (Graduate)	Pittsburgh, PA Fall 2016
Teaching Assistant , IIT-Delhi <i>Data Structures and Algorithms</i> (Undergraduate)	Delhi, India Spring 2012
Teaching Assistant , IIT-Delhi <i>Introduction to Python</i> (Undergraduate)	Delhi, India Fall 2011

MENTORING

Corentin Dugue , Masters Student at Carnegie Mellon University	Fall 2019
Joseph Standerfer , Masters Student at Carnegie Mellon University	Fall 2019
Zac Yu , Undergraduate at University of Pittsburgh	Fall 2017–Summer 2019
Elena Deng , Undergraduate at Carnegie Mellon University	Spring 2019
Sriram Kollipara , Masters Student at Carnegie Mellon University	Summer 2017
Dian Q. Le , Masters Student at Carnegie Mellon University	Spring 2017
Aarohi Palkar , Undergraduate at Carnegie Mellon University	Spring 2017
Elliot Lockerman , Masters Student at Carnegie Mellon University	Spring 2016
Duncan McIsaac , Undergraduate at Carnegie Mellon University	Fall 2015–Fall 2016

SELECTED PRESS

ZDNet , "A novel solution to curb phone use by drivers", 04/2020	
Gingdu , "A novel solution to curb phone use by drivers", 04/2020	
ZDNet , "Uh-oh: This camera watches while you work out", 09/2019	
Hackaday , "GymCam Knows Exactly What You've Been Doing In The Gym", 09/2019	
Science Daily , "GymCam tracks exercises that wearable monitors can't", 09/2019	
Medgadget , "GymCam Automatically Classifies, Counts Exercise Reps", 09/2019	
New Atlas , "Computer vision system tracks workouts when wearables can't", 09/2019	
Carnegie Mellon News , "GymCam Tracks Exercises That Wearable Monitors Can't", 09/2019	
Digitimes , "I want to analyze the effectiveness of gym exercise and use computer vision technology to do it" 09/2019	
Lab Roots , "GymCam Can Track Exercise Effectively Than Wearable Sensors", 09/2019	
Med India , "Camera Tracks Exercises More Efficiently Than Smartwatches", 09/2019	
I-Programmer , "GymCam Tracks Your Workout", 09/2019	
What Next (Polish) , "The GymCam system outperforms smartwatches during exercise", 09/2019	
CravingTechs , "GymCam tracks exercises that wearable monitors can't", 09/2019	
Les Affaires (French) , "10 things to know Thursday", 09/2019	
Market Research Finance , "GymCam Counts Your Reps And Sets Just Like A Personal Trainer", 09/2019	
Edgy , "Researchers Introduce a New Way to Monitor Gym Exercises", 09/2019	
cnBeta (Chinese) , "Scientists develop a new computer vision system to track user movements", 09/2019	
Science Daily , "Screen reader plus keyboard helps blind, low-vision users browse modern webpages", 04/2018	
Futurity , "Keyboard tech speeds browsing for blind internet users", 04/2018	

UPI, "Device helps blind, low-vision users better browse web pages", 04/2018

Gadgets New Tech (Spanish), "El lector de pantalla más el teclado ayuda a los usuarios ciegos y con baja visión a navegar por las páginas web modernas", 04/2018

Rehacare Magazine, "Screen reader plus keyboard helps blind, low-vision users browse modern webpages", 04/2018

News Medical, "New tool helps blind, low-vision users navigate modern webpages more easily", 04/2018

University of Washington News, "Screen reader plus keyboard helps blind, low-vision users browse modern webpages", 04/2018

New Scientist, "Crowdsourced software could stop SMS spam", 02/2011

Mid-Day (India), "Now 'kill' that unwanted SMS", 03/2011

NDTV (India), "Now, a software to filter SMS spam", 03/2011

RELEVANT SKILLS

Systems Skills

Applied Machine Learning, Computer Vision, Information Visualization, Data Mining & Analysis

Programming

Python/PyS60, C/C++, Java, Android, PHP, HTML/CSS, JavaScript, R

Design Skills

Wireframing, Task Analysis, Personas, Storyboarding, Graphic Design, Comparative Analysis

User Research

Interviews, Contextual Inquiry, Survey Design, Heuristic Evaluation, Cognitive Walkthroughs