# Aakash Gautam

+1-540-449-4151 | aakashg@vt.edu | http://aakash.xyz | Google Scholar

## EDUCATION

**Virginia Tech**                                                                                    Blacksburg, VA
*Ph.D. in Computer Science*                                                        *August 2015 – May 2021*

**National Institute of Technology**                                                   Allahabad, India
*B.Tech in Computer Science and Engineering*                             *June 2009 – May 2013*

## PUBLICATIONS

### Conference Papers

- **Gautam, A.**, Harrison, S., & Tatar, D. (2020). Crafting, Communality, and Computing: Building on Existing Strengths To Support a Vulnerable Population. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI'20)*

- **Gautam, A.**, Wall Bortz, W., & Tatar, D. (2020). Abstraction Through Multiple Representations in an Integrated Computational Thinking Environment. In *Proceedings of the 51st ACM Technical Symposium on Computer Science Education (SIGCSE'20)*

- Wall Bortz, W., **Gautam, A.**, Lipscomb, K., & Tatar, D. (2019). Integrating Computational Thinking into Middle School Science: A Search for Synergistic Pedagogy. In *2019 ASEE Southeastern Section Conference.*
  � *Best Paper Award*

- **Gautam, A.**, Shrestha, C., Tatar, D., & Harrison, S. (2018). Social Photo-elicitation: The Use of Communal Production of Meaning in a Sensitive Setting. In *Proceedings of 21st ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW'18)*
  � *Received Recognition for Contribution to Diversity and Inclusion*

- **Gautam, A.**, Wall Bortz, W., Tatar, D., Lipscomb, K., Rivale, S., Orsino, C. & Etzkorn, F. (2017). Finding Abstraction-Comprehension Balance: A Study of Model-Based Integrated Science and Computational Thinking Application. *American Educational Research Association (AERA'17)*

### Journal Articles

- Wall Bortz, W., **Gautam, A.**, Tatar, D., & Lipscomb, K. (2020). Missing in Measurement: Why Identifying Learning in Integrated Domains is so Hard. *Journal of Science Education and Technology (JOST), 29*(1), 121-136.

- **Gautam, A.**, Williams, D., Terry, K., Robinson, K., & Newbill, P. (2018). Mirror Worlds: Examining the Affordances of a Next Generation Immersive Learning Environment. *TechTrends*, 1-7.

### Book Chapters

- Wall Bortz, W., **Gautam, A.**, Tatar, D., & Lipscomb, K. (2019). The Availability of Pedagogical Responses and the Integration of Computational Thinking. *Integrating Digital Technology in Education: School-University-Community Collaboration, 81.*

### Refereed Short Papers

- **Gautam, A.**, Harrison, S., & Tatar, D. (2020). p for political: Participation Without Agency Is Not Enough. In *Proceedings of the 16th Participatory Design Conference (PDC'20)*

- **Gautam, A.**, Shrestha, C., & Tatar, D. (2019). Beyond Saving: A Case for Agency-First Approach Against Domestic Violence. In *Proceedings of the Tenth International Conference on Information and Communication Technologies and Development (ICTD'19)*

- **Gautam, A.**, Harrison, S., & Tatar, D. (2019). Adding Voices to Support Web Navigation Among a Low Digital Literacy Group. In *Design of Interactive Systems (DIS'19)*.

- **Gautam, A.**, Shrestha, C., Kulak, A., Harrison, S., & Tatar, D. (2018). Participatory Tensions in Working with a Vulnerable Population. In *Proceedings of the 15th Conference on Participatory Design (PDC'18)*

- **Gautam, A.**, Wall Bortz, W., & Tatar, D. (2017). Case for Integrating Computational Thinking and Science in a Low-Resource Setting. In *Proceedings of the Ninth International Conference on Information and Communication Technologies and Development (ICTD'17)*

- **Gautam, A.**, Vishwasrao, S., & Servant, F. (2017). An empirical study of activity, popularity, size, testing, and stability in continuous integration. In *Proceedings of the 14th International Conference on Mining Software Repositories (MSR'17)*

## Workshops

- **Gautam, A.**, Wong-Villacres, M., Roldan, W., Pei, L., Dickinson, J., Ismail, A., ... Yip, J. (2020). From Needs to Strengths: Operationalizing an Assets-Based Design of Technology. In *Proceedings of 23rd ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW'20)*

## Demos, Notes, and Posters

- **Gautam, A.**, & Tatar, D. (2020). Society is the System: Beyond Individual Empowerment to Structural Negotiations. In *Computing Professionals for Social Responsibility: The Past, Present and Future Values of Participatory Design*

- **Gautam, A.** (2020). Usable, Acceptable, Appropriable: Towards Practicable Privacy. In *CHI 2020 Networked Privacy Workshop*

- **Gautam, A.**, Stewart, M., Shrestha, C., Tibau, J, Harrison, S., & Tatar, D. (2019). Designing to Reflect Our Better Nature. In *Design of Interactive Systems (DIS'19)*

- **Gautam, A.** (2018). Hearing and Crafting: Co-Designing with a Vulnerable Population in Nepal. In *International Research Conference (IRC'18)*

- Stewart, M., Joshi, S., **Gautam, A.**, & Tatar, D. (2017). Thought-swapping for in-class discussions. In *Proceedings of the 9th Annual Conference on Higher Education Pedagogy (CHEP'17)*

## Grants & Awards

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| • Virginia Tech Graduate School Diversity Scholar | 2020 |
| • CS Graduate Teaching Assistant of the Year | 2020 |
| • Invited Member of Doctoral Consortium at PDC | 2020 |
| • Best Paper Award at ASEE Southeastern Section Conference | 2019 |
| • Special Recognition for Outstanding Reviews, CSCW | 2019 |
| • Invited Member of Doctoral Consortium at ICTD | 2019 |
| • SIGCHI and ICTD Student Travel Grant | 2019 |
| • Recognition for Contribution to Diversity and Inclusion, CSCW | 2018 |
| • Conference Travel Grants from VT CSGC and Center for Human-Computer Interaction | 2017, 2018, 2019 |
| • Conference Travel Grant, ICTD Conference | 2017, 2019 |
| • St. Gallen Symposium Leaders of Tomorrow Award | 2016 |

## Invited Talks & Presentations

- Rethinking Reintegration. USAID Asia Counter Trafficking In Persons Evidence Summit.          11/2020
- Communication and Communities. HCI4D @ Third Space at University of Toronto          07/2020
- Social Justice. Sustainability, Social Justice and Critical Computing Virtual Forum.          05/2020
- Gender and Design. fempower.tech CHIversity 2020.          04/2020
- Agency and Empowerment in Migration. Centre for Social Change          04/2019

## Work Experience

**Software Development Engineer II**                                                    June 2013 – June 2015
*PayPal*                                                                                  *Bangalore, India*

- Supported individuals and businesses to manage overview and detail history of their financial transactions
- Created a platform to support relief work; won third prize in the Spring 2014 Innovation Challenge
- Developed a portal to visualize service performances; won PayPal's Global Innovation Challenge in 2013

**Researching Reality Intern**                                                    June 2012 – August 2012
*Centre for Civil Society*                                                                 *New Delhi, India*

- Conducted an ethnographic study of one of the world's largest livelihood improvement programs, National Rural Livelihood Mission, in the Haryana state of India
- Provided policy suggestions to improve the efficiency of the vocational training programs in Haryana

**Intern**                                                                      August 2008 – May 2009
*Open Learning Exchange-Nepal*                                                            *Kathmandu, Nepal*

- Supported the distribution of OLPC-XO laptops in four schools in Kapilvastu district
- Facilitated teacher training programs for teachers in the four schools
- Developed integration resources for teachers to use in classrooms

## Teaching Experience

**Instructor**
*Virginia Tech*

- Introduction to Software Design. CS 1114.          Summer 2019, 2020
- Introduction to Programming in Java. CS 1054.          Summer 2019, 2020
- Introduction to Programming in C++. CS 1044.          Summer 2018

**Graduate Teaching Assistant**
*Virginia Tech*

- Introduction to Computational Thinking. CS 1014.          Spring 2017 – Present
- Introduction to Software Design. CS 1114.          Fall 2015, Spring 2016

## Students Mentored

**Graduate students**

- Chandani Shrestha | Class of 2022 (Ph.D. in Computer Science)
- MD Mazharul Islam | Class of 2019 (M.S. in Computer Science) | Now at Intel

**Undergraduate students**

- April Fitzpatrick | Class of 2019 | Now at CapTech Ventures
- Derrick Wang | Class of 2018 | Now at University of Waterloo
- Calvin Park | Class of 2018
- Siva Adhitya Gangiredla | Class of 2018 | Now at Boeing
- Stephen Bologna-Jill | Class of 2017 | Now at United States Marine Corps
- Jue Hou | Class of 2016 | Now at LinkedIn

## Academic Service

- **Associate Chair (AC):** CHI 2020 Late Breaking Work
- **Paper Reviewer:** CSCW: 2017–2021; CHI: 2019–2021; DIS: 2019; ICTD: 2019–2020; AERA: 2017–2018
- **Student Volunteer (SV):** CSCW: 2016, 2018, 2020; DIS: 2019 (SV Co-Chair); PDC: 2020