

Srinjita BHADURI

srinjitabhaduri.com [Github](#) [Google Scholar](#) [LinkedIn](#)

RESEARCH INTERESTS

Human Computer Interaction (HCI), Educational Technology, 3D Printing, and Augmented Reality.
HCI enthusiast interested in looking at ways to enhance 3D modeling and spatial thinking skills in novice users using Augmented Reality as a scaffold.

PERSONAL DATA

ADDRESS: 1475 Folsom Street, Apt387, Boulder, Colorado - 80302.
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COMPUTER SKILLS

Proficient: Python, C/C++, Java, JavaScript, HTML5/CSS
Experienced: Unity, C#, R, three.js, Node.js, Bootstrap

RELEVANT SKILLS

3D Modeling (TinkerCAD, SketchUp, Open(J)SCAD), 3D Printing, Sketching/Wireframing (Sketch), Laser Cutting, Unity game design, Augmented Reality, User studies, Qualitative and Quantitative research, Survey design using Qualtrics.

EDUCATION

2016 CURRENT	PhD Student, Computer Science and Cognitive Science <i>University of Colorado Boulder</i> ADVISOR: Dr. Tamara Sumner
	Graduate Certificate in Cognitive Science <i>University of Colorado Boulder</i>
MAY 2016	M.S., Computer Science <i>University of Colorado Boulder</i> ADVISOR: Dr. Tom Yeh
MAY 2013	Bachelor of Technology, Computer Science and Engineering <i>Techno India College of Technology, West Bengal, India</i>

PROFESSIONAL EXPERIENCE

Jan 2016 CURRENT	Graduate Research Assistant working with Dr. Tamara Sumner <i>University of Colorado Boulder</i> Work on creating rich learning experiences for youth in middle and high school using Unmanned Aerial Vehicles (UAVs) and 3D modeling and printing technologies. Responsible for all aspects of developing tools, designing research instruments for data collection, and research data analysis. These activities also extend to recruiting participants, writing IRB documents, and collaborating with partners to provide formative feedback based on participant behavior.
Aug 2014 DEC 2019	Graduate Teaching Assistant <i>University of Colorado Boulder</i> Taught lessons and held labs for Undergraduate level computer science courses like Software Methods and Tools, Introduction to Programming.
Dec 2013 JUNE 2014	Programmer Analyst Trainee <i>Cognizant Technology Solutions, Levi's Strauss project</i> Developed automation tool in VB script for day-to-day activities performed by Support team.

PUBLICATIONS

PEER REVIEWED CONFERENCE PAPERS

- [p.10] **Srinjita Bhaduri**, Peter Gyory, and Tamara Sumner. 2020. 3DARVisualizer: Debugging 3D models using Augmented Reality. Demo accepted for FabLearn Flagship conference NYC 2020.
- [p.9] Hooman Hedayati*, **Srinjita Bhaduri***, Tamara Sumner, Daniel Szafir, and Mark D Gross. 2019. HugBot: A soft robot designed to give human-like hugs. In *Proceedings of the 18th ACM Conference on Interaction Design and Children (IDC '19)*. [PDF](#) *Both authors contributed equally
- [p.8] **S. Bhaduri**, K. V. Horne, and T. Sumner. Designing an Informal Learning Curriculum to Develop 3D Modeling Knowledge and Improve Spatial Thinking Skills. In *Proceedings of the 2019 CHI Conference Extended Abstracts on Human Factors in Computing Systems (ACM)*. [PDF](#)
- [p.7] P. Chilana, N. Hudson, **S. Bhaduri**, P. Shashikumar, and S. K. Kane. (2018). Supporting Remote Real-time Expert Help: Opportunities and Challenges for Novice 3D Modelers. In *Proceedings of the IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC '18)*. [PDF](#)
- [p.6] **S. Bhaduri**, K. V. Horne, J. Ristvey, R. Russell, and T. Sumner. (2018). Learning Engineering Practices Through Drones: Iterative design of an informal learning curriculum. In *Proceedings of the 13th International Conference of the Learning Sciences (ICLS)*. [PDF](#)
- [p.5] **S. Bhaduri**, K. V. Horne, J. Ristvey, R. Russell, and T. Sumner (2018). From toys to tools: UAVs in middle-school engineering education (RTP). In *2018 ASEE Annual Conference Exposition, Salt Lake City, Utah*. [PDF](#)
- [p.4] **S. Bhaduri**, P. Gyory, and T. Sumner. (2018). "Enhancing 3D Modeling with Augmented Reality in an after-school engineering program". In *2018 ASEE Annual Conference Exposition, Salt Lake City, Utah*. [PDF](#)
- [p.3] M. Skirpan, N. Beard, **S. Bhaduri**, C. Fiesler, and T. Yeh (2018). Ethics Education in Context: A Case Study of Novel Ethics Activities for the CS Classroom. In *Proceedings of the SIGCSE technical symposium on Computer science education (SIGCSE'18)*, **Third Best Paper in the Track: Experience Reports and Tools**. [PDF](#)
- [p.2] **S. Bhaduri**, J. G. O. Tovar, and S. K. Kane. (2017). Fabrication Games: Using 3D Printers to Explore New Interactions for Tabletop Games. In *Proceedings of the 2017 ACM SIGCHI Conference on Creativity and Cognition*. Singapore. [PDF](#)
- [p.1] **S. Bhaduri**. (2017). Using 3D Modeling and Prediction as a Lens into Student Design Processes. In *Proceedings of the 2017 ACM SIGCHI Conference on Creativity and Cognition*. Singapore. [PDF](#)

BOOK CHAPTERS

- [b.1] **S. Bhaduri**, A. Gendreau, V. S. Koushik, T. Sumner, J. Ristvey, and R. Russell. (2018). Promoting Middle School Students' Motivation and Persistence in an After-School Engineering Program (J. Barnes-Johnson and J. M. Johnson, Eds.). In *STEM21: Equity in teaching and learning to meet global challenges of standards, engagement and transformation*. [DOI](#)

POSTERS PRESENTED

- [a.3] **S. Bhaduri** (2019). Supporting Spatial Thinking Skills in Novice 3D Modelers Through 3D Modeling and Augmented Reality. Poster presented at *Computing Research Association for Women, CRA-W, Chicago*.
- [a.2] **S. Bhaduri**, K. V. Horne, P. Gyory, H. N. Ngo, and T. Sumner. (2018) Enhancing 3D Modeling with Augmented Reality in an after-school engineering program. Poster presented at *ASEE Zone IV Conference 2018*.
- [a.1] **S. Bhaduri**, J. Ristvey, R. Russell, and T. Sumner. (2017). Promoting Middle School Students Motivation, Persistence, and Career Awareness in an After-school Program. Poster presented at the *annual STELAR ITEST PI and Evaluator Summit, Washington D.C.*

INVITED TALKS

Guest Speaker - User Centered Design (CSCI 5839), University of Colorado Boulder

Discussed different approaches to *Hardware and Rapid Prototyping*

Teen's Science Cafe, Denver, CO

Co-presented talk on *Designing Tactile Pictures with Craft Materials for 3D Printing*

SERVICE

EcosySTEM ARTS: Board Member, mentoring engineering team to design for children in hospitals | 2020 - PRESENT

CS Graduate Student Representative: Graduate Student Advisory Board (GSAB)

College of Engineering and Applied Science (CEAS), *University of Colorado Boulder* | 2017-2019

CS TA Recruitment Committee: *University of Colorado Boulder* | 2019

Core-Member: CS Graduate Student Association (CSGSA), *University of Colorado Boulder* | 2017-2019

Paper Review: CHI ('19-'20), ICRA ('20), SIGCSE ('20), ASEE ('17-'20), Human Computer Interaction Journal ('18), IDC ('19-'20)

Student Volunteer: CHI'19, C&C'17

TEACHING EXPERIENCE

- Fall'19 **Teaching Assistant, CS Department, University of Colorado Boulder**
Software Methods and Tools (CSCI 3308)
- Summer'18 **Lecturer, CU Science Discovery, Boulder**
3D Printing and Wearable Electronics Academy
- Summer'17 **Grader, CS Department, University of Colorado Boulder**
Human Centered Computing and Development (CSCI 3002)
- Summer'16 **Teaching Assistant, CS Department, University of Colorado Boulder**
Software Methods and Tools (CSCI 3308)
- Fall'15 **Teaching Assistant, CS Department, University of Colorado Boulder**
Software Methods and Tools (CSCI 3308)
- Summer'15 **Lecturer, CU Science Discovery, Boulder**
3D Printing camp
Teaching Assistant, CS Department, University of Colorado Boulder
Software Methods and Tools (CSCI 3308)
- Spring'15 **Teaching Assistant, CS Department, University of Colorado Boulder**
Intro to Programming - Level II (CSCI 1310)
- Fall'14 **Teaching Assistant, CS Department, University of Colorado Boulder**
Software Methods and Tools (CSCI 3308)
Grader, CS Department, University of Colorado Boulder
Intro to Programming (CSCI 1300)

MENTORING EXPERIENCE

- Spring'20 **Ketan Kamat**
Undergraduate in Aerospace Engineering, University of Colorado Boulder
Modification of 3DARVisualizer app for debugging 3D models
- Fall'19-Present **Ayush Shekhar, Julietta Rozin**
High-school students from Peak-to-Peak Charter School
Supporting 3D modeling experiences with Augmented Reality
(Secured first place in Science Research Symposium in Boulder district for the Computer Science and Math category)
- Spring'19 **Kellen Kennedy**
Undergraduate student in Biological and Chemical Engineering, University of Colorado Boulder
Approaches to design 3D modeling user studies
- Fall'17-Spring'18 **Peter Gyory**
Masters student in ATLAS Institute
Designing Augmented Reality app to help support 3D modeling
Hannie Ngo, Discovery Learning Apprentice
Undergraduate student in CS, University of Colorado Boulder
- Fall'16-Spring'17 **Jesus Ortiz Tovar**, Discovery Learning Apprentice
Undergraduate student in CS, University of Colorado Boulder
Using 3D Printers to Explore New Interactions for Tabletop Games
- Summer'15 **Lindsey Welch, Chantelle Humphries, 3D Printed braille**
Dinah Bowman, Nueka Lo,
Post-processing Techniques to Enhance Tactile Textures
Summer Research Mentor Program (REM) for high school students through CU Science Discovery.
(Results were invited and presented at the White House)

AWARDS AND HONORS

- 2020 **Beverly Sears Graduate Student Award, University of Colorado Boulder**
- 2019 **CRA-W Grad Cohort**
- 2018 **CU Science Ambassador, University of Colorado Boulder**
Outstanding Service Award
Department of Computer Science, University of Colorado Boulder
- 2017 **Lab Manager for Sumner Lab (2017 - PRESENT)**
Creativity and Cognition, 2017 **Graduate Student Symposium**, Singapore
- 2016 **Early Career Professional Development Award**
Department of Computer Science, University of Colorado Boulder
- 2015 **Outstanding Teaching Assistant**
Department of Computer Science, University of Colorado Boulder
Best User Interaction - HackCU organized by University of Colorado Boulder