# Name: Vishesh Kumar

# Formal Education

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| Fall 2015 –  now | University of Wisconsin–Madison, Madison, WI  Ph.D., Curriculum & Instruction (Digital Media)  Advisor: Prof. Matthew Berland |
| Fall 2011 –  Spring 2015 | Indian Institute of Technology Guwahati, Guwahati, Assam, India  B.Des.: Department of Design, Minor in Mathematics  Thesis Advisor: Prof. Pradeep Yammiyavar |

# Positions Held

## Professional Employment History

### Relevant Work Experience

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| Summer 2017 –  now | Graduate Research Assistant, University of Wisconsin–Madison, Digital Media (Curriculum & Instruction)  Playful Formative Assessment in Computer Science with Prof. Matthew Berland (UW–Madison); Prof. Nathan Holbert (Teacher’s College, Columbia Unviersity); Prof. Betsy DiSalvo (Georgia Institute of Technology; Daisy Rutstein (SRI International); Jeremy Roschelle (Digital Promise))  Working on designing an educational assessment game aimed to help provide teachers with engaging formative assessment tools to understand middle schoolers’ understanding of Computational Thinking concepts. |
| Fall 2015- Fall 2016,  Fall 2017 | Graduate Research Assistant, University of Wisconsin–Madison, Digital Media (Curriculum & Instruction)  Play Data Consortium project (with Prof. Matthew Berland)  Helped organize two workshops for research scholars in the fields of learning, games, and data analytics; designed and built visualizations, and games, to explore, playtest and research with field experts. |
| Summer 2017 | Graduate Research Assistant, University of Wisconsin–Madison, Digital Media (Curriculum & Instruction)  ecoMUVE project (with Prof. Matthew Berland & Prof. Chris Dede (Harvard University))  Designed and built a teacher dashboard for real time facilitation and formative assessment around the ecoXPT game developed at Harvard University. |
| Fall 2015 –  Fall 2016 | Graduate Research Assistant, University of Wisconsin–Madison, Digital Media (Curriculum & Instruction)  Makescape project (with Prof. Matthew Berland)  Conducted data analysis, research, and paper writing on the Oztoc Museum Exhibit; helped design and prototype tools to test transfer learning of museum participants. |
| Fall 2015 – Spring 2016 | Graduate Research Assistant, University of Wisconsin–Madison, Digital Media (Curriculum & Instruction)  Situating Big Data Project (with Prof. Constance Steinkuehler (then UW-Madison, now UC, Irvine) & Prof. Matthew Berland)  Qualitative and quantitative analyses of multimodal data sets from learners taking part in a science camp centered around a locally designed videogame. |
| Summer 2014 | Research Assistant, Iridescent Learning  The Ethers Games (with Dr. Kevin Miklasz (then Iridescent, now BrainPOP))  Helped analyze data from the Ethers Games – gravity and fluid dynamics based games – to explore Iridescent’s goal measures of persistence, creativity, etc. |
| Summer 2013 | Visiting Research Assistant, University of California, Berkeley, School of Education  Giant Steps for Algebra project (with Prof. Dor Abrahamson & Dr. Kiera Chase)  Helped design, and prototype digital versions of Giant Steps for Algebra, a game/simulation intended to provide an alternate embodied way of engaging with algebra concepts for pre-algebra learners. |

### Teaching Experience

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| Spring 2017 | Teaching Assistant, University of Wisconsin–Madison  *Videogames and Learning* |

# Research and Publications

## Journal/Full Peer-reviewed Publications

1. Anderson, C.G., Dalsen, J., **Kumar, V**. (2018). Failing up: How Failure in a Game Environment Promotes Learning Through Discourse. *Thinking Skills and Creativity.*
2. **Kumar, V.**, Tissenbaum, M., & Berland, M. (2017). What are visitors up to?: helping museum facilitators know what visitors are doing. In *Proceedings of the Seventh International Learning Analytics & Knowledge Conference* (LAK '17). doi:10.1145/3027385.3029456
3. Tissenbaum, M., Berland, M., & **Kumar, V**. (2016). Modeling Visitor Behavior in a Game-Based Engineering Museum Exhibit with Hidden Markov Models. *Proceedings of the 9th International Conference on Educational Data Mining*, 517-522*.*
4. Abrahamson, D., Chase, K., **Kumar, V.**, & Jain, R. (2014). Leveling transparency via situated, intermediary learning objectives. In *Proceedings of "Learning and Becoming in Practice," the 11th International Conference of the Learning Sciences (ICLS) 2014* (Vol. 1, pp. 23-30). Boulder, CO: International Society of the Learning Sciences.

## Short Peer-reviewed Publications

1. **Kumar, V.**, Tissenbaum, M., Wielgus, L., & Berland, M. (2017, June). Connected Spaces: Helping Makers Know Their Neighbors. In *Proceedings of the 2017 Conference on Interaction Design and Children* (pp. 629-635). ACM.
2. **Kumar, V.**, Tissenbaum, M., Berland, M. (2016). Trade to the top: Teaching economics and complex systems through the Lead Caravan multi-player game. In *Proceedings of the 12th International Conference on Games + Learning + Society Conference*
3. Anderson, C.G., Binzak, J.V., Dalsen, J., Saucerman, J., Jordan-Douglass, A., **Kumar, V.**, Turker, A., Berland, M., Squire, K., Steinkuehler, C. (2016). Situating Deep Multimodal Data on Game-Based STEM Learning*.*In *Proceedings of 12th International Conference for the Learning Sciences*, 974-977. Singapore.
4. **Kumar, V.**, Dargan, T., Dwivedi, U., & Vijay, P. (2015, January). Note Code: A Tangible Music Programming Puzzle Tool. In *Proceedings of the Ninth International Conference on Tangible, Embedded, and Embodied Interaction* (pp. 625-629). ACM.
5. **Kumar, V.**, Dargan, T., Kumar, A., Jaglan, A., Nayak, A., & Sorathia, K. (2014, December). Restorama: Panoramas In Restaurants, Tangible Interfaces for Cameras. In *Proceedings of the India HCI 2014 Conference on Human Computer Interaction* (p. 108). ACM.
6. **Kumar, V.,** Agrawal, H., Jain, R., Maini, A. B., & Kumar, P. (2013, November). e-Tely: electronic stamps for augmenting emails. In *Proceedings of the 25th Australian Computer-Human Interaction Conference: Augmentation, Application, Innovation, Collaboration* (pp. 421-422). ACM.
7. Subash, N. S., Nambiar, S., & **Kumar, V**. (2012, December). Braillekey: An alternative braille text input system: Comparative study of an innovative simplified text input system for the visually impaired. In *Intelligent Human Computer Interaction (IHCI), 2012 4th International Conference on* (pp. 1-4). IEEE.

# Research and Publications in Progress

## Peer-refereed Full Papers in Preparation

1. Tissenbaum, M., Berland, M., & **Kumar, V**. (in preparation). Preparing Quantitative Gameplay Data for Qualitative Use via Hidden Markov Models. To be submitted to *Journal for Educational Data Mining*,

# List of Presentations

## Conference Presentations

1. Jorion, N., Roberts, J., Bowers, A., Tissenbaum, M., Lyons, L., **Kumar, V.**, Berland, M. (2018) Uncovering Patterns in Constructionist Collaborative Learning Activities via Cluster Analysis of Museum Exhibit Log Files. *The annual meeting of the American Educational Research Association*.
2. **Kumar, V.** (2017). Making of a Maker – Connections and Community in Makerspaces. *Learning Sciences Graduate Student Conference, 2017.* Indiana University Bloomington, Bloomington, Indiana.
3. Tissenbaum, M., **Kumar, V.**, Johnson, W. B., Halverson, E. R., Berland, M. (2017). Connected Spaces: A Technology Framework to Support Distributed Collaboration and Mentorship Across Makerspaces. *The annual meeting of the American Educational Research Association*.
4. Tissenbaum, M., **Kumar, V.**, Berland, M. (2017). What Are You Doing Over There? Understanding Transitions From Unproductive to Productive States in Open-Ended Inquiry. *The annual meeting of the American Educational Research Association*.
5. Tissenbaum, M., **Kumar, V**. (2016). Connected Spaces – Facilitating Participation and Connecting Distributed Makerspaces. *Fablearn, 2016.* Stanford University.
6. **Kumar, V.** (2016). Seeing People See Complex Systems. *Learning Sciences Graduate Student Conference, 2016.* University of Illinois, Chicago.
7. Binzak, J., Anderson, C., **Kumar, V.**, Jordan-Douglass, A., and Berland, M. (2016). Comparing Gameplay Across Formal and Informal Contexts. *FDG/DiGRA 2016*. Abertay, Scotland.

# Research Support

1. Hartzmann International Conference Travel Award for School of Education Graduate Students (2018): $1000.
2. Holtz Center Graduate Student Research Travel Grant (2018): $1000.

# Service

## Reviewing and Volunteering

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| **Dates** | **Organization/Journal/Conference** | **Role** | **Level** |
| 2017-Present | Play Make Learn Conference | Volunteer | National |
| 2016-Present | American Educational Research Association | Reviewer | National |
| 2016-Present | Learning Sciences Graduate Student Conference | Reviewer | National |
| 2016 | Games, Learning, Society Conference | Reviewer | National |
| August, 2016 | Games, Learning, Society Conference | Volunteer | National |
| July, 2016 | Educational Data Mining Conference | Volunteer | National |

## Professional Organizations

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| **Dates** | **Organization/Journal/Conference** | **Role** | **Level** |
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| 2017-Present | American Educational Research Association | Member | National |
| 2016-2017 | International Educational Data Mining Society | Member | International |
| 2017-2018 | Society for Learning Analytics Research | Member | International |