

Jeremy E. Block

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## Profile:

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Fascinated by student motivations and how specific explanations can encourage curiosity, my research is focused on the use of storytelling and information visualization that may describe rationales automatically. Most recently, I have been exploring the use of analytic provenance information (click-streams, interactions, and more) to automatically summarize and generate narratives for different kinds of users. My background is a diverse mix of education, animation, game development, communications science, human-centered computing, data visualization, and computer science.

## Education:

**Ph.D. Student** at **The University of Florida**, Gainesville, Florida; **Human-Centered Computing** | Present  
Herbert Wertheim College of Engineering | Advisor: Eric D. Ragan

**B.S. Ithaca College**, Ithaca, New York; **Emerging Media** | May 2018  
Roy H. Park School of Communications (Magna Cum Laude)

## Publications/Research Experience

- Mahsan Nourani, Chiradeep Roy, **Jeremy E. Block**, Donald R. Honeycutt, Tahrima Rahman, Eric D. Ragan, Vibhav Gogate. 2022. in *ACM Transactions of Interactive Intelligent Systems*. ACM, New York, NY, USA, 30 Pages. Accepted, but awaiting publication.
- Chiradeep Roy, Mahsan Nourani, Donald R. Honeycutt, Jeremy E. Block, Tahrima Rahman, Eric D. Ragan, Nicholas Ruozi, and Vibhav Gogate. 2021. Explainable activity recognition in videos: Lessons learned. *Applied AI Letters* 2, 4 (2021), e59. DOI:<https://doi.org/10.1002/ail.2.59>
- M. Nourani, C. Roy, **J. E. Block**, D. R. Honeycutt, T. Rahman, E. D. Ragan, and V. Gogate. 2021. Anchoring Bias Affects Mental Model Formation and User Reliance in Explainable AI Systems. In *26th International Conference on Intelligent User Interfaces (IUI '21)*, April 14–17, 2021, College Station, TX, USA. ACM, New York, NY, USA, 17 pages. <https://doi.org/10.1145/3397481.3450639><sup>1</sup>
- Sina Mohseni, **Jeremy E Block**, and Eric Ragan. 2021. Quantitative Evaluation of Machine Learning Explanations: A Human-Grounded Benchmark. In *26th International Conference on Intelligent User Interfaces (IUI '21)*. Association for Computing Machinery, College Station, TX, USA, 22–31. DOI:<https://doi.org/10.1145/3397481.3450689>
- **J. E. Block** and E. D. Ragan, "Micro-entries: Encouraging Deeper Evaluation of Mental Models Over Time for Interactive Data Systems," *2020 IEEE Workshop on Evaluation and Beyond - Methodological Approaches to Visualization (BELIV)*, Salt Lake City, UT, USA, 2020, pp. 38-47, doi: [10.1109/BELIV51497.2020.00012](https://doi.org/10.1109/BELIV51497.2020.00012).
- M. Nourani, D. R. Honeycutt, **J. E. Block**, C. Roy, T. Rahman, E. D. Ragan, and V. Gogate. 2020. Investigating the Importance of First Impressions and Explainable AI with Interactive Video Analysis. In *Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems (CHI EA '20)*. Association for Computing Machinery, New York, NY, USA, 1–8. DOI: <https://doi.org/10.1145/3334480.3382967>
- P. E. Dickson, **J. E. Block**, G. N. Echevarria, and K. C. Keenan. 2017. *An Experience-based Comparison of Unity and Unreal for a Stand-alone 3D Game Development Course*. In *Proceedings of the 2017 ACM Conference on Innovation and Technology in Computer Science Education (ITICSE '17)*. ACM, New York, NY, USA, 70-75. DOI: <https://doi.org/10.1145/3059009.3059013>

<sup>1</sup> This paper won Honorable Mention at IUI'21

### **Graduate Research Assistant** | Fall 2019 - Present

University of Florida: Computer & Information Science & Engineering

- Explored visualization techniques for provenance data summarization, communication and optimization.
- Experimentally tested the impacts of provenance representations on data analysis tasks.
- Managed a small design team to identify design solutions that prevent heatstroke deaths in vehicles.
- Designed experimental study looking to improve trust parity from first impressions of black-box systems.
- Published conceptual mental model evaluation methodology capturing user's reflections over time.
- Iterated development of an interface for novel research on first impressions and trust in AI.
- Conducted literature review on automated report generation techniques for provenance data.

### **Research Assistant** | Spring 2017

Ithaca College: Computer Science Department

- Examined over 100 papers on how to assess project-based learning effectiveness in messy learning scenarios with undergraduate classes.
- Met weekly with additional researchers to distill findings and clarify goals; results were unpublished.

### **Research Assistant** | Summer 2015

Ithaca College: Computer Science Department

- More than 400 hours researching literature relating to pedagogy and Game Engines.
- Transposed a 60-hour curriculum and notes from Unity Game Engine to Unreal Engine.
- Authored and presented an academic paper in proceedings to Information Technology in Computer Science Education (ITiCSE) 2017 conference, Bologna, Italy.
- Research and recommendations resulted in a new game engine standard for the department.

## Teaching Assistantships

### **Ithaca College Computer Science Department**

Spring 2018 - **COMP325: Human-Computer Interfaces**

- Mentored student projects, providing one-on-one feedback and technical support. Often many were building web Interfaces from popular frameworks but students were not limited to one technology.
- Assessed student aptitude through weekly quizzes.

Fall 2017, Spring 2018 - **COMP106: Introduction to Multimedia Web Programming**

- Taught Canvas and Javascript methods to 30 non-computer science majors.
- Assessed student aptitude through weekly quizzes.
- Enhanced student comprehension through stack trace, metaphor & practice.
- Provided on-the-fly scaffolding for students to create algorithms for complex game mechanics.

Fall 2015 - **COMP172: CS2: Object-Oriented Programming (Java Development)**

- Assessed quizzes weekly for comprehension, completeness, and understanding.
- Constructed metaphors to assist in student understanding.

## Mentoring / Service

### **Energy Coach** | Spring 2022 - Present

Community Weatherization Coalition in Gainesville, FL

- Conduct energy tune-ups and advise renters and homeowners on efficiency options for their residences.

### **Farm Volunteer** | Fall 2019 - Present

Siembra Farm in Gainesville, FL

- Introduced and involved ~50 others to participate in regenerative agricultural practices.
- Attend weekly workdays to prepare fields and distribute seasonal, organic, locally grown food.

**Compost /Gardening Volunteer** | Summer 2021 - Present

Ethnoecology Student Garden in Gainesville, FL

- Built community through traditional gardening, weekly socials, and introductions to diverse flora.
- Offered lectures on the optimal composting procedures and ways to identify compostable materials.

**Assistant Gardening Coordinator** | Fall 2019 - Spring 2021

Student Compost Cooperative in Gainesville, FL

- Organized weekly student meetups to discuss how and what to compost at local gardens.
- Directed video productions and developed graphics for online learning initiatives during pandemic.
- Organized multiple volunteer days with more than 20 attendees to prepare fields and share mission.
- Installed solar video capture device and associated documentation to capture facility usage data.

**Undergraduate Student Mentor** | Summer 2020; Fall 2021

Research Experiences for Undergraduates (REU) - Fully Online

- Advised 3rd-year undergraduate student on proper research methods and software engineering practices to explore provenance visualization techniques and develop a novel research design.
- Advised 4th-year undergraduate student on developing a robust experimental design, study procedure, and research project timeline.

**Founder, Mentor, and Advisor** | Fall 2017 - Spring 2019

Park Post - Ithaca College Roy H. Park School of Communications in Ithaca, NY

- Founded technical mentorship community for college students pursuing post-production passions.
- Coordinated 8 alumni Skype Q&A sessions for students.
- Helped organize and present workshops on post-production topics ranging from building lower thirds and graphics packages to scripted SVG and gif animations with Adobe creative suite tools.
- Mentored undergraduate peers weekly to deconstruct complex visual effects or build assets together. Offered mini-projects to encourage tool exploration.
- Attend at least once a year as a special guest to provide an alumnus perspective and describe how post-production experience still supports my work as a researcher.

**Lead Coordinator** | Fall 2016 - Spring 2018

Connecting Elders with Technology - Various locations in Ithaca, NY

- Scheduled weekly hour-long "Genius Bar" help sessions with volunteers at retirement communities.
- Debunked common questions related to the internet and its real-world applications for seniors.
- Mentored replacement coordinator to keep the organization active after leaving Ithaca, NY.

**Lead Coordinator** | Fall 2014 - Spring 2017

Media Club - Various school and activity center locations in Ithaca, NY

- Media Club is an after-school enrichment program that provides students hands-on knowledge about how media influences society.
- Volunteered weekly in afterschool enrichment activities to discuss media literacy and production with various age groups, transitioning between elementary, middle, and high school students each semester.
- Topics included game algorithm analysis with middle schoolers, documentary filmmaking workshops for elementary school students, journalism ethics for high-schoolers, and newsletter design and production with underprivileged youth.

## Notable Media Projects

### **Communications Director** | Summer 2020

Director, Producer, Editor, and motion graphics director - "So you want to Compost at the SCC?"

- Coordinated the remote delivery of instructional videos with multimedia support from local gardeners and novice media production students. A full series of videos are planned.

### **Mobile Lead** | Spring 2018

Emerging Media Project - "QR-late"

- Worked with a team of 3 to develop a digital sync slate for Independent Filmmakers. Desktop application partners with a local database of on-set notes with captured footage automatically via QR codes and computer vision to organize files and add metadata.
- Developed local session variable architecture and downloadable web app for offline use on phone. A demonstration and talk of the project can be found at [https://youtu.be/DvOvIJVvX\\_Q](https://youtu.be/DvOvIJVvX_Q)

### **Programing Lead and Project Manager** | Spring 2017

Emerging Media Project - "Space Escape VR"

- Used SCRUM methods to manage a team of 4 over a 3-month department-wide project timeline.
- Developed and delivered a 10-minute Puzzle-based VR "Escape Room."
- Modeled and textured low-poly assets with Maya and Hypershade then integrated interactions within Unreal Engine 4 scripting.
- Managed pilot roll out of 13 invited student users for playtesting on HTC Vive and feedback.

### **Video Production Specialist** | Spring 2016

University of Canterbury, NZ: International Relations Department

- Produced walking tour videos to introduce the campus to prospective international students.
- Directed and managed international student talent and production team of 9. I cross-culturally interfaced with International Relations Staff to ensure project vision, plan, and on-time deliverables.
- Captured, animated, edited, and packaged 8 instructional videos using Adobe suite. One can be found at <https://youtu.be/XtP5x14jl40>

## Awards/Certifications

- Florida Hacks with IBM Hackathon 3rd place winner December 2021
- L3 Harris Corporation Communication Graduate Fellowship 2021, 2022
- Graduate School Preeminence Award; January 2019
- SSI Specialty Diver Certification; July 2018
- Roy H. Park School Dean's List 2014, 2015, and 2018
- Roy H. Park Scholar full-tuition merit-based scholarship; 2014 - 2018
- Apple Service Fundamentals Certification; May 2018
- Inducted to National Communication Honor Society Lambda Pi Eta; Spring 2016
- Inducted to Oracle Honor Society; Fall 2015
- PADI Open Water Scuba Diving Certification; Jan 2015
- Eagle Scout with Silver Palm Distinction; Dec 2013