

Donald R. Honeycutt

PhD Candidate in Computer Science, University of Florida

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LinkedIn: [in/donald-honeycutt-08a40a304/](https://www.linkedin.com/in/donald-honeycutt-08a40a304/) | Location: Gainesville, Florida, USA (open to relocation)
U.S. Citizen; Eligible for security clearance

Research Areas

- Human-in-the-Loop ML • Explainable & Trustworthy AI • Human-Machine Teaming
- AI Evaluation Methodology • Human-AI Interaction • Human-Factors Research • AI Alignment

Research & Professional Experience

Graduate Researcher

Aug. 2019 – Present

INDIE Lab, University of Florida *Gainesville, FL, USA*

- 10+ IRB-approved studies—between-subjects and mixed-methods designs (N=40-200)—in the field of human-centered AI, focusing on developing proof-of-concept systems and evaluating human performance, trust, reliance, and identifying human biases when using them.
- Led multiple self-directed research projects from conception to publication, coordinating contributions from both graduate and undergraduate research collaborators.
- Published peer-reviewed research at TiiS, HCOMP, IUI, and CHI.

Explainable AI & User Trust (DARPA XAI Program)

- Evaluated user performance with an XAI activity recognition system using dynamic cutset networks.
- Showed empirically that users who encounter system weaknesses first underestimate model accuracy and underuse its explanations.
- Designed and evaluated a visual debugging tool with multiscope explanations for temporal multilabel activity recognition.

Human-in-the-Loop ML

- Demonstrated through controlled experiments that soliciting corrective end-user feedback reduces trust and perceived accuracy, but reasoning-based feedback increases both.
- Developed a novel HITL feedback mechanism through the explicit creation of a relevance graph to improve personalized recommendations with explanations of feedback usage.

Knowledge Graph ML for Intelligence Analysts

- Developed a recommender system for knowledge graph analysts with online time updates based on feedback that aligns with existing analyst workflows.
- Designed and evaluated a natural language segmentation and clustering pipeline to automatically visualize communicative summaries of analysis sessions to support information passing among intelligence analysts.
- Implemented a semantic knowledge graph extraction pipeline with NER-ER and LLM relationship labeling.

Summer 2022

Human-centered ML Research Intern

Laboratory for Analytic Sciences (NSA-sponsored research lab) *Raleigh, NC, USA*

- Contributed to exploratory research development across several multidisciplinary teams for automated information summarization tools based on real-world analyst needs.
- Designed and conducted a semi-structured interview study on information passing behaviors and experiences among intelligence analysis experts, grounded in a systematic review of IC information-passing literature; performed qualitative coding and preliminary analysis on interview results.

Publications

Journal Articles

1. **Human-in-the-Loop User Feedback Affects Perceived Accuracy and Trust, but Task Subjectivity Matters.** Donald R. Honeycutt, Mahsan Nourani, and Eric D. Ragan. *ACM Transactions on Interactive Intelligent Systems (TiiS)*, 2026. (accepted with minor revisions)
2. **Preliminary Perspectives on Information Passing in the Intelligence Community.** Jeremy E. Block, Isaac Bookner, Sharon Lynn Chu, R. Jordan Crouser, Donald R. Honeycutt, Rebecca M. Jonas, Anurag Kulkarni, Yancy Vance Paredes, and Eric D. Ragan. *Analytics*, 2(2), 509–529, 2023.
3. **On the Importance of User Backgrounds and Impressions: Lessons Learned from Interactive AI Applications.** Mahsan Nourani, Chiradeep Roy, Jeremy E. Block, Donald R. Honeycutt, Tahrima Rahman, Eric D. Ragan, and Vibhav Gogate. *ACM Transactions on Interactive Intelligent Systems (TiiS)*, 12(4), 1–29, 2022.
4. **DETOXER: A Visual Debugging Tool With Multiscope Explanations for Temporal Multilabel Classification.** Mahsan Nourani, Chiradeep Roy, Donald R. Honeycutt, Eric D. Ragan, and Vibhav Gogate. *IEEE Computer Graphics and Applications*, 42(6), 37–46, 2022.
5. **Explainable Activity Recognition in Videos: Lessons Learned.** Chiradeep Roy, Mahsan Nourani, Donald R. Honeycutt, Jeremy E. Block, Tahrima Rahman, Eric D. Ragan, Nicholas Ruozzi, and Vibhav Gogate. *Applied AI Letters*, 2(4), e59, 2021.
6. **T_EX Math Here: A Simple, Unified, and Efficient Model for Web-based Math Composition.** Dan Schweitzer, Donald Honeycutt, Adam Lofgren, and Daniel Serban. *Electronic Journal of Mathematics & Technology*, 14(1), 2020.

Peer-Reviewed Conference Publications

7. **Anchoring Bias Affects Mental Model Formation and User Reliance in Explainable AI Systems.** Mahsan Nourani, Chiradeep Roy, Jeremy E. Block, Donald R. Honeycutt, Tahrima Rahman, Eric D. Ragan, and Vibhav Gogate. *Proceedings of the 26th International Conference on Intelligent User Interfaces (IUI)*, 340–350, 2021. (Honorable Mention: Best Paper Award)
8. **Soliciting Human-in-the-Loop User Feedback for Interactive Machine Learning Reduces User Trust and Impressions of Model Accuracy.** Donald Honeycutt, Mahsan Nourani, and Eric D. Ragan. *Proceedings of the AAAI Conference on Human Computation and Crowdsourcing (HCOMP)*, 8(1), 63–72, 2020.
9. **Investigating the Importance of First Impressions and Explainable AI with Interactive Video Analysis.** Mahsan Nourani, Donald R. Honeycutt, Jeremy E. Block, Chiradeep Roy, Tahrima Rahman, Eric D. Ragan, and Vibhav Gogate. *Extended Abstracts of the CHI Conference on Human Factors in Computing Systems*, 2020.

Preprints & Under Review

10. **From Data Dump to Digestible Chunks: Automated Segmentation and Summarization of Provenance Logs for Communication.** Jeremy E. Block, Donald Honeycutt, Brett Benda, Brandon Rheault, and Eric D. Ragan. 2024.

Education

Ph.D. in Computer Science

Department of Computer & Information Science & Engineering, University of Florida Gainesville, Florida, USA

Aug. 2019 – Dec. 2026 (expected)

- Dissertation: “Explaining Usage of User Feedback in Human-in-the-Loop Machine Learning”
- Advisor: Dr. Eric D. Ragan; GPA – 3.87

- Graduate School Preeminence Award 2019

Aug. 2016 – May 2019

B.S. in Computer Science

Liberty University *Lynchburg, VA, USA*

- Graduated Summa Cum Laude; GPA – 4.0
- Kappa Mu Epsilon Member - National Mathematics Honor Society

Aug. 2014 – May 2016

A.A.S in General Science

Central Virginia Community College *Lynchburg, VA, USA*

- Graduated Summa Cum Laude; GPA – 4.0
- Phi Theta Kappa Member - Two-year College Honor Society

Technical Skills

Languages:	Python, C/C++/C#, Java, JavaScript, SQL, HTML/CSS
Frameworks:	TensorFlow, PyTorch, Scikit-Learn, Numpy/Scipy, Keras, Ruptures, Neo4j, ArangoML, spaCy, OpenAI Python SDK, NetworkX, D3.js, MERN Stack
Tools/Systems:	Git, Docker, Linux, LaTeX, Jupyter Notebook, Amazon AWS
Study Infrastructure:	Amazon MTurk, Qualtrics
Statistical Analysis:	Mixed-effects models, multi-way ANOVA, and non-parametric methods (R)

Teaching Experience

Teaching Assistant

Jan 2023 – Present

University of Florida *Gainesville, FL, USA*

- Courses: Software Engineering; Data Structures and Algorithms
- Led weekly discussion sections for 30+ students; held office hours and graded assignments.
- Created new course materials including presentations and writing exam questions.

Jan 2018 – May 2019

Teaching Assistant

Liberty University *Lynchburg, VA, USA*

- Courses: Software Engineering, CS Capstone, University Physics II, Calculus II
- Developed homework assignments and other software engineering course materials
- Taught software engineering workshops and supervised physics labs

Service, Leadership, and Awards

- **Reviewer:** CHI, TVCG, Information Systems Frontiers, Information Visualization (2022–Present)
- **Mentoring:** Mentored and coordinated multiple undergraduate researchers on information visualization, human-in-the-loop ML, and human-subjects research projects.
- **Proposal Development:** Contributed to grant proposals and white papers, including development of proposed research direction and drafting framing and technical-approach sections.
- **Awards:** IUI 2021 Honorable Mention Best Paper Award, UF 2019 Graduate School Preeminence Award