Emily Jensen
emily.jensen@colorado.edu
emilykjensen.com

EDUCATION

PhD in Computer Science and Cognitive Science
Thesis: Adaptive Training Systems for Human-Robot Interaction
Advisors: Bradley Hayes and Sriram Sankaranarayanan
University of Colorado Boulder 2018 - Present

MS in Computer Science
University of Colorado Boulder 2022

BS in Mathematics, summa cum laude
BA in Cognitive Science, summa cum laude
Case Western Reserve University 2018

RESEARCH

Research Assistant Appointment
University of Colorado Boulder Fall 2018 - Present

Journeyman Fellow
Army Research Lab, HRED Summer 2022 - Summer 2023

Undergraduate Researcher
REU at Florida Institute of Technology Summer 2017

PUBLICATIONS

2024

Callahan-Flintoft, C., **Jensen, E.**, et al. (2024). *A Comparison of Head Movement Classification Methods.* Sensors 24 (4). doi:10.3390/s24041260

Jensen, E., Sankaranarayanan, S., and Hayes, B. (2024). *Large Language Models Enable Automated Formative Feedback in Human-Robot Interaction Tasks.* Workshop paper at Human-Large Language Model Interaction at the 2024 Human-Robot Interaction conference. [link to paper]

Wilson, J.R., and **Jensen, E**. (2024). *HRI Curriculum for a Liberal Arts Education.* Workshop paper at Designing an Intro to HRI Course at the 2024 Human-Robot Interaction conference. [link to paper]

Schirmer, S., Singh, J., **Jensen, E.**, et al. (in press). *Temporal Behavior Trees: Robustness and Segmentation.* Proceedings of the 2024 ACM International Conference on Hybrid Systems: Computation and Control.

Manns, B.H., Le, N., Villanueva, C.M., Ibonie, S.G., **Jensen, E.**, et al. (2024). *Mind Wandering and Bipolar Disorder Risk in Emerging Adults: An Experience Sampling Approach.* Poster abstract accepted to the 2024 Society for Affective Science (SAS) Annual Conference.

D'Mello, S.K., Moulder, R.G., and **Jensen, E**. (2024). *Momentary measures of emotions during technology-enhanced learning prospectively predict standardized test scores in two large samples.* Learning and Instruction 90. doi: 10.1016/j.learninstruc.2023.101872

2023

Villanueva, C.M., Ibonie, S.G., **Jensen, E.**, et al. (in press). *Experience Sampling Approach to Emotion Differentiation and Bipolar Mood Risk in Emerging Adults.* Journal of Emotion and Psychopathology.

Jensen, E., Hayes, B., and Sankaranarayanan, S. (2023). *More Than a Number: A Multi-dimensional Framework For Automatically Assessing Human Teleoperation Skill.* Companion of the 2023 ACM/IEEE International Conference on Human-Robot Interaction. doi:10.1145/3568294.3580167.

2022

Jensen, E., Luster, M., Pitts, B., and Sankaranarayanan, S. (2022). *Using Artificial Potential Fields To Model Driver Situational Awareness.* In 4th IFAC Workshop on Cyber-Physical and Human-Systems. doi:10.1016/j.ifacol.2023.01.118.

Jensen, E., Luster, M., Yoon, H., Pitts, B., and Sankaranarayanan, S. (2022). *Mathematical Models of Human Drivers Using Artificial Risk Fields.* IEEE 25th International Conference on Intelligent Transportation Systems (ITSC). doi:10.1109/ITSC55140.2022.9922389.

Leite, W.L., Roy, S., Chakraborty, N., Michailidis, G., Huggins-Manley, A.C., D'Mello, S.K., Faradonbeh, M.K.S., **Jensen, E.**, et al. (2022). *A novel video recommendation system for algebra: An effectiveness evaluation study.* Proceedings of the 12th International Learning Analytics and Knowledge Conference (LAK22). doi:10.1145/3506860.3506906.

D'Mello, S.K., and **Jensen, E.** (2022). *Emotional Learning Analytics.* Handbook of Learning Analytics. doi:10.18608/hla22

2021

Villanueva, C.M., Ibonie, S.G., **Jensen, E.**, et al. (2021). *Emotion differentiation and bipolar disorder risk in young adults before and during the COVID-19 pandemic: An experience-sampling approach.* Poster abstract accepted to the 2021 Society for Research in Psychopathology (SRP) Annual Conference.

Jensen, E., et al. (2021). *What You Do Predicts How You Do: Prospectively Modeling Student Quiz Performance Using Activity Features in an Online Learning Environment.* Proceedings of the Learning Analytics and Knowledge 2021 (LAK21) Conference. doi:10.1145/3448139.3448151. [**runner-up for best paper award**]

Jensen, E., Pugh, S.L., and D'Mello, S.K. (2021). *A Deep Transfer Learning Ap-*

proach to Automated Teacher Discourse Feedback. Proceedings of the Learning Analytics and Knowledge 2021 (LAK21) Conference. doi:10.1145/3448139.3448168.

2020

Jensen, E., et al. (2020). *Toward Automated Feedback on Teacher Discourse to Enhance Teacher Learning*. Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems Proceedings (CHI 2020). doi:10.1145/3313831.3376418.

2019

Jensen, E., Hutt, S., and DMello, S.K. (2019). *Generalizability of Sensor-Free Affect Detection Models in a Longitudinal Dataset of Tens of Thousands of Students*. Proceedings of the 12th International Conference on Educational Data Mining (EDM 2019). International Educational Data Mining Society. [link to paper]

2018

Bryan, K.J., Solomon, M., **Jensen, E.**, et al. (2018). *Classification of Rail Switch Data Using Machine Learning Techniques*. ASME/IEEE Joint Rail Conference, 2018 doi:10.1115/JRC2018-6175.

PRESENTATIONS

2024

Large Language Models Enable Automated Formative Feedback in Human-Robot Interaction Tasks. (March 11, 2024). Workshop talk at Human-LLM Interaction, Boulder, Colorado.

2023

Defining and Assessing Skill for Human-Robot Interaction. (September 27, 2023). Student colloquium talk at University of Colorado Boulder.

Healthy Advising Relationships. (August 24, 2023). CU Boulder Graduate Orientation, virtual.

Defining and Assessing Skill for Human-Robot Interaction. (June 14, 2023). Seminar talk at Colorado School of Mines, Golden, Colorado.

Specifying Drone Teleoperation Skill for Adaptive Curriculum Generation. (May 9, 2023). Workshop talk at Humans in Cyber-Physical Systems: Safe Teleoperation through Shared Control Workshop, San Antonio, Texas.

2022

Using Artificial Potential Fields To Model Driver Situational Awareness. (December 2, 2022). Lightning talk and poster presentation at Cyber-Physical Human-Systems 2022 Workshop, Houston, Texas.

Mathematical Models of Human Drivers Using Artificial Risk Fields. (October 5, 2022). Conference talk at Intelligent Transportation Systems 2022 Conference, virtual.

Healthy Advising Relationships. (August 19, 2022). CU Boulder Graduate Orientation, virtual.

2021

Navigating the Computer Science PhD. (August 20, 2021). CU Boulder Graduate Orientation, virtual.

Financial Basics. (August 18, 2021). CU Boulder Graduate Orientation, virtual.

What You Do Predicts How You Do: Prospectively Modeling Student Quiz Performance Using Activity Features in an Online Learning Environment. (April 14, 2021). Conference talk at Learning Analytics and Knowledge 2021 Conference, virtual.

A Deep Transfer Learning Approach to Automated Teacher Discourse Feedback. (April 14, 2021). Conference talk at Learning Analytics and Knowledge 2021 Conference, virtual.

2020

Toward Automated Feedback on Teacher Discourse to Enhance Teacher Learning. (April 15, 2020). Poster at CU Boulder Institute of Cognitive Science, Boulder, CO.

2019

Generalizability of Sensor-Free Affect Detection Models in a Longitudinal Dataset of Tens of Thousands of Students. (July 5, 2019). Conference talk at Educational Data Mining 2019 Conference, Montréal, Canada.

Generalizability of Sensor-Free Affect Detection Models. (April 18, 2019). Poster presentation at CU Boulder Graduate Research Expo, Boulder, CO. [**won best presentation award**]

Generalizability of Sensor-Free Affect Detection Models. (April 12, 2019). Poster presentation at CRA-W Grad Cohort, Chicago, IL.

TEACHING

Summer 2023

Summer Intensive Research Internship in Cyber-Physical Systems at University of New Mexico (facilitator)

- Continuation of Summer 2022 workshop.

Spring 2023

Introduction to Artificial Intelligence and Machine Learning (facilitator)

- Seminar series presenting broad AI and ML concepts for a non-technical audience.
- Developed curriculum and materials.
- Facilitated discussions to develop interdisciplinary research collaboration with CU Boulder and ARL.

Summer 2022

Summer Intensive Research Internship in Cyber-Physical Systems at University of New Mexico (facilitator)

- Continuation of Summer 2021 workshop.

Introduction to Computational Thinking

- Co-developed and organized weekly pilot workshop for graduate students.
- Created syllabus and presented topics such as logical flow, creating functions, and project management.
- Presented examples in Python and R.

Summer 2021

Summer Intensive Research Internship in Cyber-Physical Systems at University of New Mexico (facilitator)

- Developed 3-hour workshop on introductory data analysis using Python.
- Created lesson plan, follow-along materials, detailed solutions, and facilitated live (virtual) workshop.

Spring 2021

CSCI 3202: Introduction to Artificial Intelligence. (Teaching Assistant)

- Taught subjects such as search, machine learning, and reinforcement learning.
- Responsibilities included developing quizzes and projects, holding office hours, and facilitating study sessions.

Fall 2020

CSCI 5100/6100: Computer Science Colloquium. (Teaching Assistant)

- Taught strategies for interacting with technical talks from a variety of research areas.
- Responsibilities included providing feedback on student responses and questions to the colloquium talks.

CSCI 6000: Introduction to the Computer Science PhD Program. (Teaching Assistant)

- Taught basic research skills and strategies to be successful in the program.
- Responsibilities included providing feedback on reading responses and organizing panels of current and recently graduated students.

SERVICE AND LEADERSHIP

Computer Science Graduate Student Association

Representative to graduate student government	Fall 2018 - Spring 2019
Student member of faculty seach committee	Spring 2019
Student member of department Graduate Committee	Fall 2019 - Spring 2020
Developed and analyzed survey of grad student well-being	Spring 2019, 2020
Vice Chair	Spring 2020 - Fall 2020
Chair	Spring 2021 - Fall 2021

Graduate and Professional Student Government

Computer Science department representative Fall 2018 - Spring 2019

- Served on travel awards committee
- Served on graduate housing advisory committee

Graduate Senator to CU Student Government	Fall 2018 - Spring 2019
Director of Communications	Fall 2019 - Spring 2021
President of Engagement	Fall 2021 - Spring 2022
Chief of Staff	Fall 2022 - Spring 2023

ACM International Conference on Multimodal Interaction

Conference Webchair 2018

Educational Data Mining Conference

Program Committee Member 2022 - 2024

Learning Analytics and Knowledge Conference

Program Committee Member 2022

Human-Robot Interaction Conference

VAM-HRI Workshop Organizer	2023
Student Volunteer	2024

Cyber Physical Systems/Internet of Things Week

Humans in Cyber-Physical Systems Workshop Organizer 2023

Reviewer: AIED (2020, 2021), CHI (2021), L@S (2021), HRI (2023)
Computers & Education (2022), Higher Education Pedagogies (2022)

OUTREACH AND MENTORSHIP

Masters Students
- Tetsumichi Umada 2019-2020

Undergraduate Students
- Xuefei Sun 2019
- Jasdeep Singh 2023
- Kashyap Chapalli 2023
- Nora Su 2024

High School Students
- Conner Malley 2019
- Tanishqa Puhan 2021

Graduate School Peer Mentor 2019, 2020
Science Fair Judge at Colorado STEM Academy 2019, 2020
Tech Help Facilitator at Boulder Public Library 2019 -2023

AFFILIATIONS

Association for Computing Machinery/SIGCHI

Phi Beta Kappa Academic Honor Society, *Ohio Alpha Chapter*

Pi Mu Epsilon National Honorary Mathematics Society, *Ohio Sigma Chapter*

Phi Sigma Rho engineering sorority, *Omicron Chapter*
- National Ritual Director 2021 - Present

HONORS AND AWARDS

Endowed Founders Fellowship
University of Colorado Boulder 2023

President's Commendation for outstanding service
Phi Sigma Rho National Sorority 2023

Conference Support Fellowship
University of Colorado Boulder 2023

CPHS Fellow
Cyber-Physical Human-Systems Workshop 2022

Volunteer of the Year Award
Phi Sigma Rho National Sorority 2022

David T. Spalding Graduate Teaching Fund Fellowship Award
University of Colorado Boulder 2022

Graduate and Professional Student Government Travel Grant

University of Colorado Boulder 2021

Outstanding Service Award
University of Colorado Boulder 2020

Department Student Travel Award
University of Colorado Boulder 2020

Best Research Poster
University of Colorado Boulder 2019

Computer Science Departmental Fellowship
University of Colorado Boulder 2018

Webster Godman Simon Mathematics Award
Case Western Reserve University 2018

President's Commendation for outstanding service
Phi Sigma Rho National Sorority 2017

Phi Beta Kappa Prize for outstanding sophomore in liberal arts and sciences
Case Western Reserve University 2016