# **Emily Jensen**

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**EDUCATION** PhD in Computer Science and Cognitive Science

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**

## In Review

Journal paper submission to Clinical Psychological Science.

Journal paper submission to Educational Researcher.

#### 2023

**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.

#### 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.

**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 Approach 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

#### **PRESENTATIONS**

#### 2023

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.

## 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]

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

2022, 2023

### **Educational Data Mining Conference**

Program Committee Member

	Learning Analytics and Knowledge Conference Program Committee Member	2022
	Human-Robot Interaction Conference VAM-HRI Workshop Organizer	2023
	Cyber Physical Systems/Internet of Things Week Humans in Cyber-Physical Systems Workshop Organizer	2023
	<b>Reviewer:</b> 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
	High School Students • Conner Malley	2019
	• Tanishqa Puhan	2021
	Graduate School Peer Mentor Science Fair Judge at Colorado STEM Academy Tech Help Facilitator at Boulder Public Library	2019, 2020 2019, 2020 2019 - Present
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	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