Angela E.B. Stewart

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Academic Positions

University of Pittsburgh (September 2022 – Present)
Assistant Professor, School of Computing and Information
Research Scientist, Learning Research and Development Center

Carnegie Mellon University (August 2020 – August 2022)
Human-Computer Interaction Institute
Postdoctoral Fellow
Faculty Principle Investigator: Amy Ogan

Education

University of Colorado Boulder
Department of Computer Science and Institute of Cognitive Science
Ph.D. in Computer Science (Graduated July 2020)
Advisor: Sidney K. D'Mello

University of Notre Dame
Department of Computer Science
PhD Student in Computer Science (August 2015 – August 2017)
Advisor: Sidney K. D'Mello

Auburn University
Department of Computer Science and Software Engineering
Bachelor of Software Engineering (Graduated May 2015)
Summa Cum Laude

Awards

Best Paper, 10th International Conference on Learning Analytics and Knowledge, 2020

Best Student Paper, 21st ACM International Conference on Multimodal Interaction, 2019

Distinguished Student Speaker, University of Colorado Boulder Department of Computer Science Colloquia, 2018

Best Student Paper, 10th International Conference on Educational Data Mining, 2017

Intern Symposium First Place Winner, Lexmark International, 2015

Publications (In Review/ Revision)

1. Jennifer Nwogu, Amanda Buddemeyer, Rosta Farzan, Angela E.B. Stewart, Erin Walker. Comic-Boarding with Children: Understanding the use of Language in Human-Human and Human-Agent Dialogue. In Review for Proceedings of the 22nd ACM Interaction Design and Children Conference, IDC 2023.
2. Saranya Venkatraman, Prasenjit Mitra, Sushil S, Katherine Dennis, Zaynab Gates, Ung-Sang Lee, Sherice Clarke, Angela E.B. Stewart, Tricia Ngoon, Amy Ogan.

	Supporting Teachers' Professional Development via Dialog Act Classification of Classroom Discourse. In Review for Proceedings of the 32nd International Joint Conference on Artificial Intelligence, IJCAI 2023.
Journal Articles & Conference Publications (Full Paper) – Peer Reviewed	3. Yinmiao Li, Jennifer Nwogu, Amanda Buddemeyer, Jaemarie Solyst, Jina Lee, Erin Walker, Amy Ogan, Angela E.B. Stewart. I Want to Be Unique from Other Robots: Positioning Girls as Co-Creators of Social Robots in Culturally-Responsive Computing Education. In Press for Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems, CHI '23. (AR[1] = 28%) 4. Jaemarie Solyst, Shixian Xie, Ellia Yang, Angela E.B. Stewart, Motahhare Eslami, Jessica Hammer, Amy Ogan. I Would Like to Design: Black Girls Analyzing and Ideating Fair and Accountable AI. In Press for Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems, CHI '23. (AR = 28%) 5. Amanda Buddemeyer, Jennifer Nwogu, Jaemarie Solyst, Erin Walker, Tara Nkrumah, Amy Ogan, Leshell Hatley, Angela E.B. Stewart. Unwritten Magic: Participatory Design of AI Dialogue to Empower Marginalized Voices. Proceedings of the 2022 ACM Conference on Information Technology for Social Good, GoodIT 2022. 6. Jaemarie Solyst, Alexis Axon, Angela E.B. Stewart, Motahhare Eslami, Amy Ogan. Investigating Middle School Girls' Perspectives and Knowledge Gaps on Ethics and Fairness in Artificial Intelligence in a Lightweight Workshop. Proceedings of the 16th International Conference of the Learning Sciences, ICLS 2022. 7. Jaemarie Solyst, Tara Nkrumah, Angela E.B. Stewart, Amanda Buddemeyer, Erin Walker, and Amy Ogan. Running an Online Synchronous Culturally Responsive Computing Camp for Middle School Girls. Proceedings of the 27th Conference on Innovation and Technology in Computer Science Education. (AR = 29%) 8. Stephen Hutt, Angela E.B. Stewart, Julie Gregg, Stephen M. Mattingly, Sidney K. D'Mello. Breaking free from the lab: Feasibility of longitudinal eye-gaze tracking in the workplace. Proceedings of the13th ACM Symposium on Eye Tracking Research and Applications, ETRA '22. 9. Jaemarie Solyst, Tara Nkrumah, Angela E.B. Stewart, Jina Lee, Erin Walker, Amy Ogan. Understanding instructors' cultivation of connectedness in K-12 online synchronous culturally responsive STEM and computing education. Proceedings of the 24th ACM Conference on Computer-Supported Cooperative Work and Social Computing, CSCW '22. 10. Samuel L. Pugh, Arjun Ramesh Rao, Angela E.B. Stewart, Sidney K. D'Mello. Do speech-based collaboration analytics generalize across task contexts? Proceedings of the 12th International Conference on Learning Analytics and Knowledge, LAK '22. (**Best Paper Nominee**) 11. Chen Sun, Valerie J. Shute, Angela E.B. Stewart, Quinton Beck-White, Caroline Reinhardt, Nicholas D. Duran, Sidney K. D'Mello. The relationship between collaborative problem solving processes and objective outcomes in a game-based learning environment. In press for Computers in Human Behavior. 12. Samuel Pugh, Shree Krishna Subburaj, Arjun Ramesh Rao, Angela E.B. Stewart, Jessica Andrews-Todd, and Sidney K. D'Mello. Say what? Automatic modeling of

[1] When applicable, acceptance rate (AR) of the conference is indicated.

collaborative problem solving skills from student speech in the wild. Proceedings of the Fourteenth International Conference on Educational Data Mining, EDM '21. (AR = 22%)

13. Angela E.B. Stewart, Zachary Keirn, and Sidney K. D'Mello. Multimodal modeling of collaborative problem solving in triads. User Modeling and User Adapted Interaction, 2021. (IF[2] = 4.68)
14. Shree Krishna Subburaj, Angela E.B. Stewart, Arjun Ramesh Rao, Sidney K. D'Mello. Multimodal, multiparty modeling of collaborative problem solving performance. In Proceedings of the 2020 International Conference on Multimodal Interaction, ICMI ' 20. (AR = 41%)
15. Angela E.B. Stewart, Mary J. Amon, Nicholas D. Duran, and Sidney K. D'Mello. Beyond team makeup: Diversity in teams predicts valued outcomes in computer-mediated collaborations. In Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems, CHI '20. (AR = 24%)
16. Hana Vrzakova, Mary J. Amon, Angela E.B. Stewart, Nicholas D. Duran, and Sidney K. D'Mello. Focused or stuck together: Multimodal patterns reveal triads' performance in collaborative problem solving. In Proceedings of the 10th International Conference on Learning Analytics and Knowledge, LAK '20. (**Best Paper**, AR = 31%)
17. Angela E.B. Stewart, Hana Vrzakova, Chen Sun, Jade Yonehiro, Cathlyn A. Stone, Nicholas D. Duran, Valerie J. Shute, and Sidney K. D'Mello. I say, you say, we say: Using spoken language to model socio-cognitive processes during computer-supported collaborative problem solving. In Proceedings of the 22nd ACM Conference on Computer-Supported Cooperative Work and Social Computing, CSCW '19. (AR = 31%)
18. Lucca Eloy, Angela E.B. Stewart, Mary J. Amon, Caroline Reinhardt, Amanda Michaels, Chen Sun, Valerie J. Shute, Nicholas D. Duran, and Sidney K. D'Mello. Modeling team-level multimodal dynamics during multiparty collaboration. In Proceedings of the 21st ACM International Conference on Multimodal Interaction, ICMI '19. (**Best Student Paper**, AR = 22%)
19. Hana Vrzakova, Mary J. Amon, Angela E. B. Stewart, and Sidney K. D'Mello. Dynamics of visual attention in multiparty collaborative problem solving using multidimensional recurrence quantification analysis. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems, CHI '19. (AR = 24%)
20. Chen Sun, Valerie J Shute, Angela E.B. Stewart, Jade Yonehiro, Nicholas D. Duran, and Sidney K. D'Mello. A generalized competency model of collaborative problem solving. Computers and Education 2019. (IF = 5.30)
21. Angela E.B. Stewart, Zachary A. Keirn, and Sidney K. D'Mello. Multimodal modeling of coordination and coregulation patterns in speech rate during triadic collaborative problem solving. In Proceedings of the 20th ACM International Conference on Multimodal Interaction, ICMI '18. (AR = 15.4%)
22. Angela E.B. Stewart and Sidney K. D'Mello. Connecting the dots towards collaborative AIED: Linking group makeup to process to learning. In Proceedings

[2] When applicable, Impact Factor (IF) of the journal is indicated.

	of the 19th International Conference on Artificial Intelligence in Education, AIED '18. (AR = 25%) 23. Angela E.B. Stewart, Nigel Bosch, and Sidney K. D'Mello. Generalizability of face-based mind wandering detection across task contexts. In Proceedings of the 10th International Conference on Educational Data Mining, EDM '17. (**Best Student Paper**, AR = 25%) 24. Angela E.B. Stewart, Nigel Bosch, Huili Chen, Patrick Donnelly, and Sidney K. D'Mello. Face forward: Detecting mind wandering from video during narrative film comprehension. In Proceedings of the 18th International Conference on Artificial Intelligence in Education, AIED '17. (AR = 30%)
Conference Publications (Short Paper, Extended Abstract) – Peer Reviewed	25. Zhen Wu, Amanda Buddemeyer, Angela E.B. Stewart, Erin Walker. I Dance Too: Girls Identity Reflections with a Social Robot. In Press for Proceedings of the 54th ACM Technical Symposium on Computer Science Education, SIGCSE '23. 26. Jaemarie Solyst, Tara Nkrumah, Angela E.B. Stewart, Amanda Buddemeyer, Erin Walker, Amy Ogan. Insights from Virtual Culturally-Responsive Computing Camps. Proceedings of the 53rd ACM Technical Symposium on Computer Science Education, SIGCSE '22. 27. Angela E.B. Stewart, Jaemarie Solyst, Amanda Buddemeyer, Leshell Hatley, Sharon Henderson-Singer, Kimberly Scott, Erin Walker and Amy Ogan. Explaining engagement: Learner behaviors in a virtual coding camp. In press for Proceedings of the 22nd International Conference on Artificial Intelligence in Education. 28. Stephen Hutt, Jessica Hardey, Robert Bixler, Angela E.B. Stewart, Evan Risko, and Sidney K. DMello. Gaze-based detection of mind wandering during lecture viewing. In Proceedings of the 10th International Conference on Educational Data Mining, EDM '17. (AR = 42%) 29. Angela E.B. Stewart, Nigel Bosch, Huili Chen, Patrick J. Donnelly, and Sidney K. D'Mello. Where's your m ind at? Video-based mind wandering detection during film viewing. In Proceedings of the 2016 Conference on User Modeling Adaptation and Personalization, UMAP '16. (AR = 41%)
Workshop Proceedings - Peer Reviewed	30. Angela E.B. Stewart, LuEttaMae Lawrence, Nikki Lobczowski, Stephen Hutt. Knowing Your ABCs: Asset Based Communication for Actionable Learning Interventions. In Workshop Proceedings of the 20th Biennial Conference of the European Association on Learning and Instruction, EARLI'23. 31. Sidney K. D'Mello, Angela E.B. Stewart, Mary J. Amon, Chen Sun, Nicholas D. Duran, Valerie J. Shute. Towards dynamic intelligent support for collaborative problem solving. Approaches and Challenges in Team Tutoring Workshop at the 20th International Conference on Artificial Intelligence in Education, AIED '19.
Talks	Invited Speaker, Carnegie Mellon University & University of Pittsburgh Micro-Course on Technology, Humanity, and Social Justice, Spring 2023. Invited Panelist, How Universal Design for Learning can Inform Human-Centered Design in Learning Analytics, Learning Analytics and Knowledge (LAK'23), Spring 2023.

	Invited Panelist, Advancing the Science of Collaboration through AI, Empowering Learners for the Age of AI (ELAI'22), Fall 2022. Invited Speaker, University of Illinois Urbana-Champaign, Spring 2022 Invited Speaker, Colorado School of Mines, Fall 2021 Invited Speaker, University of Pittsburgh School of Computing and Information, Fall 2021 Invite Spotlight Speaker, Michigan AI Symposium, Fall 2021 Invited Panelist, Blacks in Technology YP CoNext@ASU, Spring 2021 Human-Computer Interaction Institute Seminar Series, Carnegie Mellon University, Fall 2020 Invited Talk, MIRRORLab Student Speaker Series, Summer 2020 Department of Computer Science Colloquia, University of Colorado Boulder, Fall 2019
Posters	Angela E.B. Stewart, Hana Vrzakova, Chen Sun, Jade Yonehiro, Cathlyn Adele Stone, Nicholas D. Duran, Valerie J. Shute, and Sidney K. D'Mello. I say, you say, we say: Using language to model shared knowledge construction during collaborative problem solving. Computing Research Association Grad Cohort for Underrepresented Minorities and People with Disabilities, CRA-URMD '19. Angela E.B. Stewart, Nigel Bosch, and Sidney K. D'Mello. Detecting mind wandering during film viewing. Tapia Celebration of Diversity in Computing, Tapia '17. Angela E.B. Stewart, Nigel Bosch, Huili Chen, Patrick J. Donnelly, and Sidney K. D'Mello. Video-based mind wandering detection during film viewing. Computing Research Association Grad Cohort for Women, CRA-W '17.
Teaching Experience	Undergraduate Social Computing, Primary Instructor, University of Pittsburgh, Spring 2023. Foundations of Human-Computer Interaction, Guest Lecture, University of Pittsburgh, Spring 2022. Human-Computer Interaction for Education, Guest Lecture, Carnegie Mellong University, Spring 2022. Nonlinear Dynamics: Mathematical and Computational Approaches, Teaching Assistant, Sante Fe Institute, Spring 2019

	Nonlinear Dynamics: Mathematical and Computational Approaches, Course Instructor, Sante Fe Institute, Fall 2018 Data Structures, Teaching Assistant and Lab Section Primary Instructor, University of Colorado Boulder, Fall 2017
Research Funding	Identity Reflections and Learning with a Social Robot for Black, Latinx, and Indigenous Girls, ISLS Emerging Scholars, 2022 PI $10,000 Deans Graduate Assistantship, University of Colorado Boulder, 2017 $21,800 Computer Science Departmental Fellowship, University of Colorado Boulder, 2017 $3,000 Dean's Fellowship, University of Notre Dame, 2015 $95,400 GEM Fellowship, National GEM Consortium, 2015 $40,000
Travel Funding	Jacobs Foundation Conference Travel Funding, 2023 $1,800 SIGCHI Student Travel Grant, ACM - Special Interest Group on Human-Computer Interaction, 2019 $1,800 Departmental Conference Scholarship, University of Colorado Boulder Computer Science Department, 2019 $1,200 CRA Grad Cohort Workshop for URMD, Computing Research Association, 2019 $1,000 Conference Funding, AIED Society, 2018 $1,500 Conference Funding, AIED Society and EDM Society, 2017 $1,500 CRA-W Grad Cohort Workshop, Computing Research Association, 2017 $1,000

	Tapia Celebration of Diversity in Computing Scholarship, National Science Foundation, 2017 $1,000 CRA-W Grad Cohort Workshop, Computing Research Association, 2016 $1,000 Tapia Celebration of Diversity in Computing Scholarship, IBM, 2016 $1,000
University Service	PittInclusion Mentor, University of Pittsburgh, 2023 PhD Admitted Students Days, University of Pittsburgh, 2023 Co-Organizer with Rosta Farzan PhD Admissions Committee, University of Pittsburgh, 2023 SCI Tech Fellows Advisor, University of Pittsburgh, 2022 - 2023
Conference Organization	Workshop Chair, Educational Data Mining, 2022 Co-Chair with Steven Bradley Associate Chair, ACM CHI Conference on Human Factors in Computing Systems Learning Education and Families Subcommittee, 2022, 2023 Equitable Learning Analytics Panel Organizer, Learning Analytics and Knowledge, 2021 Co-Organized with Caitlin Mills and Laura Allen Workshop Chair, Learning Analytics and Knowledge, 2021 Co-Chair with Caitlin Mills and Paul Prinsloo
Academic Service	Grant Panelist, National Science Foundation, 2022 Program Committee, International Society of the Learning Sciences Annual Meeting, 2022 - 2023 Program Committee, Learning Technologies for Equality, Diversity, and Inclusion Workshop (LearnTec4EDI), 2021 Program Committee, Learning Analytics and Knowledge, 2021 Program Committee, Learning at Scale, 2021 Society for Learning Analytics Research Diversity and Inclusion Working Group, 2020 - 2022 Program Committee, Artificial Intelligence in Education (AIED), 2021, 2020

Program Committee, Educational Data Mining (EDM), 2020, 2017

Program Committee, International Conference on Multimodal Interaction (ICMI), 2020, 2019

PhD Student Recruitment Committee, University of Colorado Boulder, 2020, 2019

Faculty Search Panel of PhD Students, University of Colorado Boulder, 2019

Local Committee, International Conference on Multimodal Interaction, 2018

PhD Student Recruiter, Colorado Advantage Graduate School Preview Weekend, 2018

Reviewer: Computer-Supported Cooperative Work and Social Computing (CSCW), Educational Data Mining (EDM), Artificial Intelligence in Education (AIED), Transactions on Learning Technologies, British Journal of Educational Technology, Computers and Education, Journal of Learning Analytics

External Service

Board of Directors, Aucitat, 2018 – 2021

Science Fair Judge, Colorado STEM Academy, 2019, 2020

PhD Student Facilitator, University of Colorado Boulder Girls Who Code, 2019

AI & Machine Learning Curriculum Lead, The Coding School, 2018 - 2019

Computer Science Outreach Instructor & Organizer, University of Notre Dame, 2016 – 2017
Co-Organized with Tijana Milenković

Core Curriculum Developer, The Coding School, 2016 – 2017

Black Graduate Student Association Treasurer, University of Notre Dame, 2016 – 2017

CS Workshop Organizer, University of Notre Dame Expanding Your Horizons, 2018
Co-Organized with Tijana Milenković

Science Fair Judge, Northern Indiana Regional Science Engineering Fair, 2016

Web Development Instructor, Saint Joseph Public Library, 2015 - 2016

Pre-College Initiatives Chair, Auburn University NSBE, 2014 – 2015

STEM Tutor, Auburn University NSBE, 2014 – 2015

	A Walk for Education Volunteer, Auburn University NSBE, 2014
Graduate Student Mentorship	Rojin Taheri, Asset-Based Engagement Interventions, 2023 Xinyi Bao, Asset-based Engagement Interventions, 2023 Favour Adesina, Co-Creation of a Social Programmable Robot, 2022 Mabel Tsado, Co-Creation of a Social Programmalbe Robot, 2022 Linda Xue, Identity Reflection and Learning with a Social Robot, 2022 Christina Steele, Power and Identity in Computing Education, 2022 Safiyyah Scott, Power and Identity in Computing Education, 2022 Demi Lee, Girls Attitudes towards Co-Creation of a Social Robot, 2021 Arjun Rao, Multimodal Machine Learning for Collaborative Problem Solving, 2020 Krishna Subburaj, Multimodal Machine Learning for Collaborative Problem Solving, 2020 Ashwin Vasan, Multimodal Machine Learning for Collaborative Problem Solving, 2019 Lucca Eloy, Nonlinear Dynamics for Collaborative Problem Solving, 2018 - 2019
Under-graduate Student Mentorship	Campbell Martinez, Designing a Culturally-Responsive Robotics Camp, 2023. Jahzara Taylor, Designing a Culturally-Responsive Robotics Camp, 2023. Krishna Naik, Designing a Culturally-Responsive Robotics Camp, 2023 Diana Randall, Multimodal Engagement in Culturally-Responsive STEM Environments, 2023 Shivangi Tiwari, Multimodal Engagement in Culturally-Responsive STEM Environments, 2023 Ben Farbo, Multimodal Engagement in Culturally-Responsive STEM Environments, 2023 KeQing Jiang, Multimodal Engagement in Culturally-Responsive STEM Environments, 2023 Gabriella Howse, Designing a Culturally-Responsive Robotics Camp, 2022

	Nicole Xiang, Identity Reflection and Learning with a Social Robot, 2022 Nolani Kennedy-Smith, Social Robots as Pets, 2021 Jennifer Nwogu, Co-Design of Social Robots for Middle School Girls of Color, 2021 Stephanie Eristoff, Teacher Agency in Classroom Discussions & Behavioral Engagement in Middle School Girls Learning Computer Science, 2021 Vaishnavi Gorantla, Teacher Agency in Classroom Discussions & Behavioral Engagement in Middle School Girls Learning Computer Science, 2021 Jina Lee, Co-Design of Social Robots for Middle School Girls of Color, 2020 – 2021 Daniel Noh, Scaffolding Teachers Reflection using Discussion Data Visualization, 2020 - 2021 Cooper Steputis, Multimodal Modeling for Collaborative Problem Solving, 2019 - 2020 Erin Clark, Multimodal Modeling for Collaborative Problem Solving, 2019 - 2020 Caroline Reinhardt, Multimodal Modeling for Collaborative Problem Solving, 2018 - 2020 David Blair, Multimodal Modeling for Collaborative Problem Solving, 2017 - 2020 Samantha Scaglione, Multimodal Modeling for Collaborative Problem Solving, 2017 Mae Raab, Multimodal Modeling for Collaborative Problem Solving, 2016 Eugene Choi, Multimodal Modeling for Collaborative Problem Solving, 2016
Industry Experience	User Experience Design Intern, Lexmark International, 2016 Designed aspects of a user-facing device management portal, including a scoped and global search mechanic. Firmware Engineering Intern, Lexmark International, 2015 Designed and implemented test cases for firmware's conformance to network protocols.