Preston S. Menke
(864) 395-1399 | Menke@erskine.edu
LinkedIn | GitHub | Personal Website | Faculty Page

Education

Institutions

- Wright State University Human Factors and I/O Psychology - PhD *Expected December 2025*
  - GPA 3.92
  - Member of the Adaptive Strategic Thinking and Executive Control of Cognition and Affect Laboratory
  - College of Science and Math Representative
  - Research Interests: Learning and Training, Organizational Behavior, Human-Computer Interaction, Trust, Psychometrics, Cognitive Systems Engineering, Game-Based Methods
- Wright State University Human Factors and I/O Psychology – M.S. *March 2024*
  - Thesis and software on Peer-Assisted Learning using Miller Analogies
  - Ph.D. Qualifying Exam topics: Expertise, Decision-Making, Measurement, Cognitive Systems
- Alumnus of Erskine College - Bachelor of Science *May 2021*
  - Majors in Psychology, Biology, and Health Science
  - Near completion of minor in Business Healthcare
- Project Lead the Way: Intro to Engineering Program *May 2017*
  - Coursework: Engineering Methods, Aerospace Engineering, Digital Electronics, Computer Engineering, Computer-Integrated Manufacturing, Product Design
  - Skills: Circuit Boards, Soldering, Six Sigma Techniques, Wind Tunnel Testing, Computational Flight Testing, Basic Rocket Physics
  - Projects: Computational flight testing, mini-golf construction, product modeling, and a capstone project (Desktop Fidget Device)

Extracurricular

- Certificates *2018-2023*
  - Tech: Google IT Professional, Various Amazon Web and Cloud Services
  - Healthcare: Youth Protection Training, First Aid, CPR, AED, Mental Health
  - Research and Education: Responsible Research, Privacy and Security, Social and Behavioral, Conflicts of Interest, Biomedical Research, Fraud Reporting
- 100+ hours of medical professional shadowing experience
  - Chiropractic *Fall 2018*
  - Physical Therapy & Athletic Training *Spring 2019*
- UX and Product Development Technology
  - 3D Modeling: Autodesk (2014-2017), Blender (2020-2025), Cura (2022)
  - 3D Environments: Unreal Engine (2016-2025), Unity (2022)
  - UX Specific Tools: Canva (2024), Figma (2025), Sketch (2025)
  - Personal Website Development in VSCode (2021-2025)
- Programming and Computer System Experience
  - Microsoft Suite, Cognitive Architecture (ACT-R), LISP, HTML/CSS, JavaScript, jQuery, Java, SQL, Python, R, Julia, Regex, C++, Tableau, PowerBI, SAS, SPSS, Agile, Scrum,

Markdown, Vercel Web Deployment, Git, Synology Systems, JPathfinder, EEG, basic fMRI

- Software Development
  - Undergraduate Research Software *Fall 2019*
  - Covid-19 Awareness video game *Fall 2020*
  - M.S. Thesis Software *Spring 2022*
  - Collaboration - Cyberball: Ostracism Research Software *October 2023*
  - Personal Website (prestonmenke.com; in maintenance) *Fall 2023*
  - Collaboration – Game Based Organizational Constraints *January 2025*
  - Ecological Interface Driving Simulation *Spring 2025*
- Educational Materials
  - Measurement Curriculum *Expected Spring 2025*
    - Coded in Jupyter using Python and R
    - Statistics, Psychometrics, Bayesian Modeling, Machine Learning, General Linear Models, and Qualitative Methods
  - User-Experience PowerPoints and Portfolio *Expected Summer 2025*
  - Music Theory in Python *Expected Summer 2025*

Employment Information

- Erskine College *August 2019-May 2021*
  - Convocation AV/IT Team Lead
  - Resident Assistant
  - Erskine Entertainment Board Chair
- Tech Talent and Strategy
  - TA: Advanced Java, Full Stack Bootcamp, Advanced Data Science *2020*
  - Lead Instructor: Introductory Data Science, Advanced Data Science *2020-2024*
    - Coordinate instructors
    - Teach advanced data science courses
    - Oversee development and updating of curriculum (statistics, machine learning)
- Wright State University
  - Intro Psychology Lab Instructor (PSY1010) *Spring 2021*
  - Research Methods Lab Instructor (PSY3010, 3020) *2022-2024*
  - Advanced Research Methods Course Instructor (PSY4020) *Spring 2025*
- Air Force Research Laboratory Repperger Intern *Summer 2023*
  - Title: “Agents for Co-Training and Knowledge Capture”
  - Supervisor: Jayde King, Research Psychologist at Air Force Research Laboratory
  - Critical Technology Areas: Human-Machine Interfaces, Trusted AI and Autonomy
  - Produced manuscript and code sample outlining autonomous mental model elicitation and visualization for trusted Human-AI Co-Learning
  - Presented research at Repperger Poster Session and AFRL Intern Poster Session
- Air Force Research Laboratory Explainable Artificial Intelligence (XAI) *Fall/Winter 2023*
  - Title: “Validation and Testing of Novel XAI-iML Analytics Software”
  - Supervisor: Ian Joyce, XAI Tech Lead at Air Force Research Laboratory
  - Critical Technology Areas: Human-Machine Interfaces, Trusted AI and Autonomy

- Produced manuscript and experimental design for multistage meta-analysis to test a Human-Machine Interface for Explainable Artificial Intelligence software across professional medical domains under the Department of Defense
- Acted as the sole human factors professional among a team of programmers, statisticians, medical professionals, and researchers

- Air Force Research Laboratory ORISE Participant *2024*
  - Working with Lindsey McIntire as an Applied Cognitive Neuroscience Researcher in conjunction with Kairos Research: AI Company.
  - Conducting research on non-invasive cognitive neuroscience involving vagal nerve and trigeminal nerve stimulation techniques
  - Other activities include photo-biomodulation, fMRI, and sleep deprivation research.
- Assistant Professor of Business *2025 – Present*
  - Create and present courses that emphasize a humanity-centered and behavioral approach to business
  - Emphasize the interdisciplinary nature of business, revealing to students that business is not the only path to business
  - Prepare students with real-world problems and connections that align classroom theory to real-world applications
  - Member of the institution's AI Taskforce and Historical Restoration efforts

Research Experience

- Undergraduate Research *Fall 2019 – Spring 2021*
  - 'Specialized Coordination: Adaptation to a Digital Interface'
    - Presented at Carolinas Psychology Conference *April 2020*
    - Solo developer of software and data pipeline
    - Document accepted for Honors Capstone
  - 'Biofeedback in Technology' *Fall 2020 – Spring 2021*
    - Presented at Erskine Biology Senior Seminar *Spring 2021*
- 'Understanding the Latter-Day Saints,' unpublished *December 2023*
  - Conducted an extensive dive into the history and traditions of the Latter-Day Saints. This was a week-long project that finished as a 43-page essay.
- Graduate Student Presentations *Fall 2021 - Spring 2024*
  - First Year Experience: Peer-Assisted Learning in MAT-PAL *Fall 2022*
  - An Introduction to Affective Computing *Spring 2023*
  - M.S. Thesis Project
    - 'Benefits and Costs of Peer Assisted Learning in a Complex Task'
    - Developer of software and data pipeline
    - Defense Presentation *March 2024*
- Professional Presentations
  - Society of IO Psychology
    - Ramsey, M. C., Bowling, N.A., Formica, O. Menke, P.S. & LaHuis, D.M. (2025). Varying Too Little—or Too Much? Using Response Variability to Assess Carelessness. *Society for Industrial and Organizational Psychology Annual Conference*, Denver, CO, United States.
    - Ramsey, M.C., Bowling, N.A., LaHuis, D.M., Sexton, D.J., & Menke, P. S. (2024). Validity of Response Variability Based Indices of Careless Responding.

Society for Industrial and Organizational Psychology Annual Conference, Chicago, IL, United States.
        - Ramsey, M.C., Menke, P. S., Becker, S.P., Schwanz, R.J., Merkle, J.D., & Bowling, N.A. (2023). Examining the Validity of Instructional Manipulation Checks as Measures of Careless Responding. Presented at *Society for Industrial and Organizational Psychology Annual Conference*, Boston, MA, United States.
    - Wright State University Festival of Research
        - Menke, P., Carson, J., Juvina, I. (2023). Peer-Assisted Learning leads to greater learning gain over individual learning in a complex task. Poster session presented at *College of Science and Mathematics Festival of Research*, Wright State University, Dayton, OH, United States.
        - Carson, J., Menke, P., Watamaniuk, S., Juvina, I., Aue, W., MacNeil, E., & Davis, T. (2024, November). Exploring Mechanisms Underlying Time-on-Task Effects in an Image Recognition Task. Poster session presented at *College of Science and Mathematics Festival of Research*, Wright State University, Dayton, OH, United States.
        - Carson, J., Menke, P., Crowe, P., Wong, C.H., & Juvina, I. (2021, October). Peer-assisted learning: Investigating the mechanisms of knowledge spillover and trust. Poster session presented at *College of Science and Mathematics Festival of Research*, Wright State University, Dayton, OH, United States.
    - Other
        - Menke, P., Juvina, I., Carson, J., Rodgers, B., Wong, J. (2023). Investigating Peer-Assisted Learning in the Miller Analogies Task. Poster session presented at *Midwest Cognitive Science*, Ohio University, Athens, OH, United States.
        - Carson, J., Menke, P. S., Wong, C. H., Kindell, K., & Juvina, I. (2023). Interaction among peers increases performance in the Remote Associates Test. In *Proceedings of the Annual Meeting of the Cognitive Science Society* (Vol. 45, No. 45).
        - Juvina, I., Carson, J., Menke, P., & Crowe, P. (2022). Cognitive and motivational effects in peer-assisted learning. In *International Conference on Cognitive Modeling* (MathPsych/ICCM 2022). mathpsych.org/presentation/881.
        - Juvina, I., O'Neill, K., Carson, J., Menke, P., Wong, C. H., McNett, H., & Holsinger, G. (2022, October). Human-AI Coordination to Induce Flow in Adaptive Learning Systems. In *Romanian Conference on Human-Computer Interaction* (pp. 139-162). Cham: Springer Nature Switzerland.
- Publications
    - Juvina, I., Carson, J., Menke, P., & Crowe, P. (under review). Knowledge spillover, trust, effort, and error exposure in peer-assisted learning. *Topics in Cognitive Science*.
    - Carson, J., Juvina, I., O'Neill, K., Wong, C. H., Menke, P., Kindell, K. M., & Harmon, E. (2024). Peer-assisted learning is more effective at higher task complexity and difficulty. *Topics in Cognitive Science, 16*(1), 129-153.
    - Juvina, I., O'Neill, K., Carson, J., Menke, P., Wong, C.H., McNett, H., & Holsinger, G. (2024). Human-AI coordination to induce flow in adaptive learning systems. In: Kolski, C., Mihăescu, M.C., Rebedea, T. (eds). *AI approaches for designing and evaluating interactive intelligent systems.* ROCHI 2022. Learning and Analytics in Intelligent Systems, vol 36. Springer, Cham. https://doi.org/10.1007/978-3-031-53957-2_7

- Ramsey, M. C., Bowling, N. A., & Menke, P. S. (2024). *Evaluating the Construct Validity of Instructional Manipulation Checks as Measures of Careless Responding to Surveys*. Applied psychological measurement, 48(7-8), 341–356. https://doi.org/10.1177/01466216241284293

- Other Projects
  - Cyberball: Ostracism & Fractals Research Study *2023 - Present*
    - Co-developer of software given to participants,
    - Developed via Unity and packaged for WebGL
  - Counter Productive Work Behavior Meta-Analysis *2021 – Present*
  - 'Usability Assessment of Medical Big Data Inference Tool Using Topological Hierarchical Decomposition' *2022 – Present*
    - Collaboration with the Warfighter Interactions and Readiness Division, and Explainable Artificial Intelligence group at the Air Force Research Lab
  - 'Knowledge Representations Via Transformer AI Technologies,' unpublished *2022*
    - Collaboration with the Warfighter Interactions and Readiness Division, and Human-AI Teaming group at the Air Force Research Lab
  - Noninvasive Brain Stimulation (NIBS) Technologies *2023 – Present*
    - Collaboration with NIBS, and the Air and Space Biosciences Division in the Air Force Research Lab
    - Collaboration with Kairos Research
  - Dissertation *2024 - Present*
    - 'A Cognitive Systems Engineering Approach to Pro-Environmental Education'
    - Co-developer of software
  - Collaboration on Dissertation Project *2024 - Present*
    - 'Moderating Role of Organizational Variables: Task Complexity and Task Significance on Constraints and Outcomes'
    - Developer of software focusing on a game-based approach to above criteria

Honors and Awards

- NCAA Athletic Scholarship Recipient *2017*
- Receiver of Steven A. Winburn Memorial Scholarship *2020*
  - "Based upon social, religious, and academic achievements and activities as well as character references and are renewable provided recipients maintain the high standards of the award."
- Psychology Honors Capstone Acceptance *2020*
  - Psychology research course thesis was accepted into Honors Capstone
- Dr. M. Burton Brown Award from the Department of Psychology *2021*
  - "Erskine College presents the Department of Psychology and Sociology, Dr. M. Burton Brown Award to Preston Menke, as the most outstanding psychology student in academic achievement and as a contributor to campus life."
- Circle of Leaders Award *2021*
  - "This award recognizes graduating seniors whose leadership has made a lasting impression on the Erskine community."
- Awarded Air Force Research Laboratory Internships *2023*

    - Selected for the Repperger internship, a competitive opportunity to intern with the 711th Human Performance Wing. When Repperger concluded, AFRL offered me a subsequent internship as a sole Human Factors researcher funded by the DoD.
- ORISE Internship *January 2024 - Present*
    - I was selected to work on a team of cognitive neuroscientists and facilitate collaboration with an external partner, Kairos Research.

Graduate Coursework

- General: Cognition, Social Psychology, Experimental Design and Quantitative Methods, Experimental Design with ANOVA, Measurement Models, History of Psychology, Predictive Models, Problem Solving and Reasoning, Psychological Game Theory (Audit)
- Human Factors: Cognitive Computational Modeling, Cognitive Neuroscience, Ecological Interface Design, Engineering Psych (Audit), Perception (Audit), Cognitive Systems Engineering (Audit)
- IO Psychology: IO Research Methods, Personality, Psychometrics, Personnel Selection, Ergonomics, Psycholinguistics, Task and Work Analysis, Mind and Environment (Audit)

Research Relevant Undergraduate Coursework

- Professional Psychology, History and Systems of Psychology, College Statistics, Experimental Methodology, Psychological Statistics, Psychology Honors Senior Seminar, Psychology Honors Research, Biology Senior Seminar I and II

Undergraduate Involvement at Erskine College

- Intersociety Council Chair, Treasurer
    - Led Intersociety Council and presided over all campus literary societies
    - Re-established yearly debate competition among societies after Covid-19
    - Re-established and wrote constitution of Intersociety
    - Interfaced and compromised between campus faculty and societies
    - Represented the Intersociety Council to the Student Government Association
- Erskine Activity Board Chair
    - Led team in conjunction with campus faculty to put on campus events
- Euphemian Building Restoration Committee Chair
    - Facilitated communication between campus board, historical society, alumni office, president's office, literary society, and others involved in restoration of a historical site
- Psychology Club President
    - Facilitated campus psychology events and mental health awareness
- eSports Club President and Team Member
    - Established club to interface the eSports Team with campus life
    - Wrote constitution and successfully petitioned society
    - Attended eSports showcase at the TD SYNNEX Technology Conference 2022
- Euphemian Literary Society Vice President
    - Contributed to campus life through events and community outreach
- Student Government Secretary, Junior Class Secretary, Euphemian Literary Society Secretary
    - Kept notes of docket items discussed during student government meetings and other cabinet meetings

- Convocation AV/IT Team Leader
    - Directly worked with faculty and convocation presenters twice a week
    - Directly assisted campus chaplain (Pastor Josh Chiles) for all tech needs
    - Responsible for AV systems in campus auditoriums
- Resident Assistant, 2 years
    - Maintained campus housing and ensured safety of residents
    - Facilitated dorm events
    - Directed students to any of the professional resources on campus
    - Participated in community outreach
- NCAA
    - Participated in 3 seasons of basketball and a pre-season of volleyball

*Most resources, software, and documents throughout this CV are available upon request.