

Daniel Pace

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Education

B.S. Psychology (Expected Winter 2026)

Southern Oregon University, Ashland, OR

- **GPA: 3.83**
- **Relevant Coursework:** Research Methods, Cognitive Psychology, Neuroscience, Statistics, Learning & Cognition
- *Includes Associate of Arts Oregon Transfer (GPA: 3.92) from Linn-Benton Community College*

Research Interests

- Neurodivergent cognition and cognitive diversity (ADHD/ASD-informed)
- Human-AI interaction and theory of mind in artificial systems
- Uncertainty processing, adaptive heuristics, and complex decision-making
- Computational modeling of cognition and emergent systems
- Applied cognitive science in learning, attention, and educational contexts

Research Experience

AI Learning Assistant, Research & Policy

Center for the Advancement of Teaching and Learning (CATL)

Southern Oregon University (2024–2025)

- Co-developed institutional research, whitepapers, and policy recommendations for the ethical and effective application of AI in education.
- Co-authored a whitepaper analyzing AI-assisted learning, metacognitive scaffolding for students, and necessary policy adaptations for academic integrity.
- Developed evaluation protocols for OpenAI's Safety Testing Program, focusing on AI persuasion patterns, academic integrity, and ethical safeguards.
- Created the Human-AI Creative Collaboration (HAIC) framework, a conceptual model describing hybrid creative processes between human users and AI systems.
- Built a sentiment analysis pipeline to convert qualitative student feedback into structured JSON, perform sentiment classification, and generate data visualizations to inform faculty.

Publications & Presentations

Poster Presentations

- **Pace, D.** (2024). *Cognitive Theories, Attention Dynamics, and Memory Mechanisms.*

Poster presented for Cognitive Psychology, Southern Oregon University.

Academic Research Proposals (Southern Oregon University)

- **Effects of Digital Therapy Interventions on Student Stress (2024):** Designed an academic research project investigating whether digital CBT-style supports reduce student stress, evaluating intervention usability and stress mechanisms.
- **Frustration and Mood Effects in ASD (2025):** Designed an academic paper examining frustration tolerance, emotional regulation, and sensory load in autistic individuals, integrating empirical literature with cognitive theory.

Whitepapers & Technical Reports

- **Pace, D.** (2024). *Rethinking Academic Integrity in the Age of AI*. Southern Oregon University.
- **Pace, D.** (2024). *Proposal for OpenAI's Safety Testing Program*. Southern Oregon University.
- **Pace, D.** (2024). *Human-AI Creative Collaboration Framework (HAIC)*.

Manuscripts in Preparation

- **Pace, D.** (2025). *PsychoCompugenics: A Framework for Synthetic AI Cognition*.
- **Pace, D.** (2025). *U: A Quantitative Metric of Usefulness*.
- **Pace, D.** (2024). *Distributed Failure Analysis: A Theoretical Exploration*.
- **Pace, D.** (2024). *A Resilient Framework for Substance Misuse Prevention*.

Computational & Theoretical Projects

Emergence Engine (E2) - Agent-Based Cognitive Simulation (2023–Present)

- Developed a novel agent-based cognitive simulation in **JavaScript** to model adaptive heuristics, distributed cognition, and emergent system-level behavior.
- Conducts systematic evaluations of training runs, state transitions, environmental constraints, and heuristic interactions to investigate uncertainty processing.
- Investigates parallels between emergent artificial systems and human cognitive processes, specifically neurodivergent (ND) attention patterns and context-driven behavior.

ACE (Adaptive Cognitive Enhancement) Application (2024–Present)

- **Built a gamified task-tracking system** using **Next.js** and **Supabase** based on psychology and neuroscience-informed behavioral activation principles.
- Incorporates modular tasks, executive function supports (informed by ADHD/ASD cognition), reinforcement schedules, and user-centered experience design.

Mindi - AI-Driven Chatbot & Note-Taking Application (2024–Present)

- Developed an AI-driven chatbot for seamless interaction and note-taking, leveraging generative AI to enhance productivity and organize information.

PsychoCompugenics Framework (2024–Present)

- Created a theoretical framework for analyzing AI cognition from a synthetic, pattern-based perspective, bridging computational models and cognitive psychology.
- Developed novel terminology for model confidence, inference deviation, contextual misalignment, and pattern-formation dynamics in artificial systems.

Technical Skills

- **Programming & Tools:** Python, **JavaScript**, **Next.js**, **SQL**, MATLAB, VBA, Git/GitHub, Google Colab, **Supabase**, **Vercel**, **Tailwind CSS**
- **AI & Data:** **Azure AI**, **GPT APIs**, Data Visualization, **Database Management**, JSON Structuring, Excel Automation, Qualtrics, Statistical Modeling, z-scores, Regression Basics, Data Cleaning, Classification Systems
- **Research Methods:** Experimental Design, Cognitive Modeling, Agent-Based Simulation, Mixed Methods Synthesis, Human-AI Interaction Studies, Applied Ethics Analysis

Professional Experience

Data Systems & Process Analyst

Palm Harbor / Cavco Manufacturing (2022–Present)

- **Developed an AI workflow application to convert PDF documents to Excel using Azure AI**, enhancing efficiency in document management.
- **Built an application to reconcile sales order confirmations**, reducing manual workload and increasing data accuracy.
- **Reworked the payroll system** for the production department, streamlining processes using automation tools and significantly reducing cognitive load for users.
- Designed cognitive load-reducing workflows and decision-support tools for high-volume data processing.

Practicum Student

Jackson Street Youth Services (2024)

- Completed 150+ hours supporting youth services, client documentation systems, and digital workflow improvements.

Awards & Honors

- **Peak Student of the Year**, Southern Oregon University (2024–2025)
- **Phi Kappa Phi Honors Society** Member
- **Provost's List**, Southern Oregon University (Spring 2025)
- **Provost's List**, Southern Oregon University (Fall 2024)

Professional Development & Certifications

- **Google Data Analytics Professional Certificate** (Coursera)

References available upon request.