

Yeswanth K. Chela

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OBJECTIVE

Human factors engineer with a background in behavioral science and computer science, combining systems thinking with strong data analysis skills. Experienced in usability testing, experimental design, and behavioral metrics development across domains like aviation, AI, human performance and digital health. Skilled in building testbeds, analyzing high-resolution user data, and operationalizing constructs. Passionate about designing adaptive, human-centered systems grounded in cognitive and perceptual ergonomics.

EDUCATION

Arizona State University | Mesa, AZ

Currently Pursuing

M.S. Human Systems Engineering

GPA: 4.00 / 4.00

Jawaharlal Nehru Technological University | Anantapur

June 2022

B. Tech Computer Science and Engineering

GPA: 3.22 / 4.00

WORK EXPERIENCE

Arizona State University | Tempe, AZ

Oct 2023 - Present

Human Factors Research Assistant

- At the **ADAPT Lab** (PI: Dr. Erin Chiou) design and pilot experiments to study human-AI interaction, focusing on operationalizing trust and responsivity. I developed measures to track user behavior and AI responses in real-time, enabling fine-grained analysis of responsivity profiles. My work informs the development of adaptive, user-aligned systems by characterizing perceptual, cognitive, and behavioral indicators of effective human-AI collaboration.
- At the **Center for Accelerating Operational Efficiency** (PI: Dr.Mickey Mancenido) I designed and ran experiments to study resilience in human-AI systems within critical settings. I built and deployed full-stack testbeds and emulators to simulate visual screening environments with varying AI efficiency levels. I managed large-scale participant studies, including a 180-participant online study and in-person focus groups with security SMEs at Las Vegas Airport. This work helps identify resilience and failure points in AI-enabled systems, generating insights to inform safer, more reliable AI deployment in high-stakes environments.
- At the **Systems Psychology Lab** (PI: Dr. Jamie Gorman) I worked on UAV simulation studies examining team performance under uncertainty, applying human factors and FAA-aligned aviation safety guidelines, and refining experimental design and data collection.

UX Researcher | TCS Research (*Advertising and Media Studies*) | Pune, India

Jul 2022 – Jul 2023

- Led human-centered research on Composite Diffusion ML interfaces, focusing on usability, cognitive load, and interaction design. Conducted testing with 15 users and iterated on multimodal UI. Ran a mixed-methods study on perceptions of AI-generated media; presented findings at a leading generative AI workshop.

UX Researcher | VetRemedi | Bengaluru, India

Oct 2021– Jul 2022

- Conducted in-depth user research for a rural-focused online pet healthcare platform, leading 50+ contextual interviews and designing mixed-method instruments to capture behavioral, cognitive, and accessibility challenges. Synthesized findings into actionable design strategies that shaped product development and outreach efforts—driving a 19% increase in user trust and adoption of digital healthcare services.

SELECTED PROJECT

Proactive Firefighting UAV Prototype | Aviation Vehicle Design | ASU.

Aug 2023 – Dec 2023

- Led ergonomic design of 3 UAV control workstations (Pilot, Fire Monitor, Ground Control) using FAA HFDS anthropometric standards, optimizing seated eye heights, functional reach envelopes, and display viewing angles to accommodate 5th-95th percentile Technical Operations personnel.
- Applied human factors standards (FAA HFDS) and usability evaluation tools (NASA-TLX, SUS) to design integrated control-display interface layouts, ensuring optimal button sizing and appropriate visual display distances. Leveraged Multiple Resource Theory (MRT) effectively distribute multimodal information across operator roles.

LEADERSHIP & ACHIEVEMENTS

Presented a research paper and poster on **Digital Addictions and behaviors** – HFES ASPIRE 2024

Vice President of Internal Affairs – Human Factors and Ergonomics Society at ASU – May 2024 to May 2025.

Director of Information Technology – Indian Students Association at ASU - May 2024 to Apr 2025.

SKILLS

Human Factors Skills: Cognitive Workload Assessment, Task Analysis (CTA, HTA), Error Analysis, Human Performance Measurement, Systems Safety Analysis, Experimental Design, Statistical Analysis, Perception Research, Cognitive Modeling.

Design and Programming Skills: User Experience (UX) Design, Prototyping, Wireframing, Usability Testing, HTML/CSS, JavaScript, React, Python, Database Systems, Java, Figma, SPSS, R, JMP Script,

Standards & Compliance: ISO 9241, ANSI/HFES 100, MIL-STD-1472, FAA HF Guidelines, IEC 62366, EU AI Act, Ergonomic Design Standards.