Deborah J. Aks, Ph.D.

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USER EXPERIENCE RESEARCHER

COGNITIVE & PERCEPTUAL BEHAVIOR | MIXED METHODS | HUMAN-CENTERED DESIGN (HCD)

UX/UI researcher with a doctorate in Experimental Psychology and 5+ years of recent experience studying cutting-edge User Experience Research (UXR) concepts aimed at enhancing website and technology usage. Credentials include serving as design lead on 75+ collaborative research projects and lead author on 50+ publications and conference proceedings to date. Reputation for deep intellectual curiosity and a highly collaborative work style. Passionate about helping organizations gain a deeper understanding of user behavior, user perception, and human/computer interaction in order to develop breakthrough products and usability improvements.

AREAS OF EXPERTISE

- **Perceptual-Cognitive Science**: PhD-level understanding of behavioral and perceptual science, including leading extensive research into attention, eye movements, visual search, object tracking, depth perception, behavioral dynamics, perceptual illusions & aesthetics.

- **User Experience Research (UXR)**: Passionate about applying robust scientific research methods to examine usability issues related to web/software/VR product usage; well-versed in critical UX concepts such as iterative/remote usability testing, controlled & contextual inquiry, heuristic evaluations, A/B tests, tree-tests, and card sorts; comprehensive understanding of the strengths (and shortcomings) of various research methods, including when and how best to apply them as part of the product development process.

- **Data Science & Statistical Analysis**: Advanced statistical, and qualitative/quantitative analysis capabilities; highly skilled in curating and analyzing complex data sets to uncover breakthrough insights into user perception, attention, eye-movements and behavior—funneling these insights to appropriate product teams and stakeholder groups for inclusion in next-generation technology development.

- **Research Project Leadership**: Extensive background in experimental design and implementation of UX-related research studies; proficient in Mixed Methods Research methodology; broad experience holding Lead Investigator roles and collaborating closely with software engineers and multi-disciplinary scientific teams to resolve UI/UX questions and explore basic and practical research problems.

- **Communication & Presentation Skills**: Outstanding communicator, able to draw upon a long history of successful classroom instruction and conference speaking experience to prepare/deliver effective presentations and explain complex scientific concepts to academic and non-academic audiences alike; additional strengths in technical writing, editing, training, and e-learning coursework development.

CAREER HISTORY & ACCOMPLISHMENTS

Cognitive Science, UX & UI Researcher | RUTGERS CENTER FOR COGNITIVE SCIENCE (2011-2020)

Associate faculty member of internationally recognized Cognitive Science research institute, leading the design/implementation of innovative eye-tracking research projects. Recent studies aimed at optimizing & understanding the user experience with online user interfaces, and improving user experience for individuals with central vision loss. In addition to research achievements, teaching a series of Cognitive Science and Research Methods courses and serving as research mentor/advisor to 30+ students pursuing careers in research, medicine, technology, and related industries. Project summaries are available here in my portfolio.

Cognitive Science Research Associate Professor | RUTGERS UNIVERSITY (2005-2011)

As research faculty member, designed and led over 25 research projects involving visual search, object & information tracking, attention, eye-movement, and behavioral dynamics—with focus on testing the role of attention and user distraction in online or computer tasks. Project details available at Research Gate & my research summary.

Associate Professor of Psychology (Tenured) | UNIVERSITY OF WISCONSIN – WHITEWATER (2000-2005)

Invited to join the faculty for the University's Department of Psychology, teaching courses and conducting research into a variety of human perception, cognition, and research topics—including studies focusing on information search, visual perception, user-perspective, depth perception, and the effects of exercise on cognitive processing. Recognized for teaching and designing innovative research experiments aimed at applying dynamical systems to cognitive and perceptual behavior, performing both novel and conventional data analysis to uncover insights into how people behave and perceive over time.

EDUCATION & TRAINING

- **Ph.D. Experimental Psychology: Human Perception** | University of British Columbia, Vancouver, BC
- **B.A. Psychology** | Binghamton University, State University of New York (SUNY)
- **User Experience Research (UXR) Methods** | University of Michigan - Coursera Online Certificate
- **R Programming for Statistical Analysis** | DataCamp: Online Data Science Certificates

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PUBLICATIONS & WORK SAMPLES

- My portfolio at DebAks.info summarizing UXR & human perceptual-cognitive/behavioral research
- Comprehensive list of projects/research to date: Research Gate, Microsoft Academic & Google Scholar
- Index of 35+ specific research projects completed in the areas of UX, UI, and Perceptual Science
- Freelance articles published on UXR/HCI issues: Cognitive Science & Technology Writing
- E-Learning Content & Curriculum: Applying Cognitive Science to problems in the real & virtual worlds

RESEARCH METHODS SKILLS
- **Mixed Methods** | Quantitative & Qualitative, Behavioral & Attitudinal
- **Behavioral Methods**| Usability, A/B testing, Search, Eye-Tracking & Clickstream analysis
- **Attitudinal Methods** | Survey, SUS, SEQ, Card Sort, Tree-test, Usability +Think-a loud, Journey Mapping
- **Statistical/Data Analysis** | Descriptive, Inferential, Bayesian, Classification, Temporal Dynamics

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SOFTWARE / TECHNOLOGY SKILLS

- **Data Analysis Tools** | R, RStudio, SPSS, MS Excel
- **Open-Source Coding** | R Statistical Programming
- **Eye-Tracking Technology** | Eyelink1000, Experiment Builder, Dataviewer
- **UX & Usability Testing** | Optimal Workshop Tools, UserTesting.com, Zoom, Eye-tracking,
- **Web Design & Online Tutorials** | Wix, Word Press, HTML5, CSS, Figma
- **Learning Management Systems** | Canvas, Blackboard, Sakai