

Runhan (Brad) Yang

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INDUSTRIAL EXPERIENCE

User Experience Research Intern

Jan 2021 - May 2022

Synchrony Financial, the UX group

Champaign, IL

- Project 1: front page design of go paperless service – refined the target user demographics; among 12 alternatives, meticulously selected the design that efficiently communicated the benefits of going paperless, resulting in an increase in user opt-ins
Methods: *Questionnaire, 5 second test, AB test, Think-Out-Loud test*
- Project 2: credit card service web redesign – evaluated the efficacy of the redesigned interface by assessing readability and ease of service enrollment; proposed 5 suggestions for clearer navigation and information accessibility
Methods: *AB test, Think-Out-Loud test*
- Project 3: buy-now-pay-later service launch – identified and addressed pain points in the purchase flow; emphasized clarity in communication through refined language and highlighted instructions
Methods: *Think-Out-Loud test*

ACADEMIC EXPERIENCE

Doctoral Researcher in Cognitive Science

May 2022 - present

University of Illinois Urbana-Champaign, Human Memory and Cognition Lab

Champaign, IL

- Led 6 end-to-end behavioral and psychophysical studies that investigated the benefit of self-scheduled short breaks in perceptual tasks and developed computational models to describe the perceptual performance
Software: *Matlab (PsychToolBox), JavaScript (JsPsych), Python (PsychoPy), R*
Methods: *Model Fitting, Cross-Validation, Grid Search, Data Visualization*
- Designed and implemented a physiological study that used pupillometry to unfold attention span on vigilance tasks
Software: *Matlab (PsychToolBox), Eyelink 1000, R*
Methods: *Large-scale Data Processing and Analyzing, FDR Correction, Data Visualization*
- Developed and executed over 10 large-scale simulations to replicate eye-tracking data using diffusion models, model metacognition with Item Response Theory, and determine power and sample size for studies involving non-linear model fitting
Software: *R*
Methods: *Bayesian Analysis, Diffusion Model, Item Response Theory, Cluster Computing, Cross-Validation*
- Mentored 3 junior researchers through their undergraduate thesis projects, oversaw and coordinated work and meetings of over 10 research assistants each semester to ensure project efficiency

Teaching Assistant

Aug 2022 - present

University of Illinois Urbana-Champaign, Psychology Department

Champaign, IL

- Taught independently on a wide range of cognitive science topics and led discussions twice a week to foster understanding
- Graded and commented on the homework and held office hours to clear up confusion

EDUCATION

University of Illinois Urbana-Champaign

Champaign, IL

PhD in Psychology (Cognitive and Quantitative Track)

2022 - 2027 (expected)

MS in Psychological Science

2020 - 2022

BS in Psychology & BA in Economics

2016 - 2019

SKILLS

Statistics

Inferential Statistics, Bayesian Statistics, Hierarchical Model, Computational Model, Data visualization

Programming

Advanced: R, Matlab

Intermediate: JavaScript, Python

UX Research

UserZoom, Think-Out-Loud test, Questionnaire, AB test, 5 second test

Language

Chinese (native), English (fluent)

HIGHLIGHTED PUBLICATIONS AND PRESENTATIONS

- [8] **Yang, R.**, Patel, T. N., Fairbairn, C. E., & Benjamin, A. S. (2025). The effect of alcohol on extended vigilance and on the benefits of rest breaks. *Attention, Perception, & Psychophysics*, 1-12.
- [7] **Yang, R.**, & Benjamin, A. S. (in press). Self-pacing in attention-demanding discrimination task enhances stimulus discriminability and reduces uncertainty. *Journal of Experimental Psychology: Learning, Memory, & Cognition*.
- [6] Patel, T. N., **Yang, R.**, Steyvers, M., & Benjamin, A. S. (2024). The metacognition of vigilance: Using self-scheduled breaks to improve sustained attention. *Journal of Experimental Psychology: Applied*. <https://doi.org/10.1037/xap0000518>
- [5] Benjamin, A. S., **Yang, R.**, & Unal, B. (2025). Changes in recent practices in research and publishing: A view from the Journal of Experimental Psychology: Learning, Memory, and Cognition. *Journal of Experimental Psychology: Learning, Memory, & Cognition*.
- [4] **Yang, R.**, & Benjamin, A. S. (2023, November 16-19) *Self-pacing in attention-demanding search task enhances stimulus discriminability and reduces uncertainty* [Poster presentation]. Psychonomic Society 64th Annual Meeting, San Francisco, California, United States. ***Graduate Conference Award received (15 out of 1000)**
- [3] **Yang, R.**, Whitlock, J., & Benjamin, A. S. (2024, November 21-24) *Model of eye movements during forced-choice recognition* [Poster presentation]. Psychonomic Society 65th Annual Meeting, New York City, New York, United States.
- [2] **Yang, R.**, Whitlock, J., & Benjamin, A. S. (in prep). Model of eye movements during forced-choice recognition.
- [1] **Yang, R.**, & Benjamin, A. S. (in prep). The effect of self-pacing on phasic attention.