

# Justin L. Frandsen

PhD Student in Cognition & Cognitive Neuroscience · Texas A&M University

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## EDUCATION

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### Texas A&M University

Ph.D., Cognition and Cognitive Neuroscience

College Station, TX

2023 – 2028 (expected)

### University of Nebraska – Lincoln

B.A., Psychology; Minor in Anthropology

Lincoln, NE

2019 – 2023

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## PEER-REVIEWED PUBLICATIONS

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**Frandsen, J. L.** & Anderson, B. A. (accepted). The role of statistical learning in attentional guidance during search through naturalistic scenes. *Journal of Experimental Psychology: Learning, Memory, and Cognition*.

**Frandsen, J. L.**, Stilwell, B. T., & Anderson, B. A. (manuscript in preparation). Independent suppression of multiple salient distractors.

**Frandsen, J. L.** & Anderson, B. A. (manuscript in preparation). Curiosity ignored the cat: How exploration promotes context-dependent distractor suppression in visual search through real-world scenes.

Lake, B. R., Whitham, W., Schapiro, S. J., **Frandsen, J. L.**, & Yorzinski, J. L. (manuscript in preparation). *Chimpanzees (Pan troglodytes) and olive baboons (Papio anubis) preferentially view fire in naturalistic images.*

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## RESEARCH EXPERIENCE

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### Attentional Bias to Rewarded Object-Location Associations in Naturalistic Scenes

Texas A&M University – Learning and Attention Lab (PI: Brian Anderson, Collaborator: Sojung Youn) March 2025 – Present

- Examine whether reward history induces object–location associations similar to statistical regularities in naturalistic scenes
- Designed an eye-tracking paradigm to quantify reward-modulated attentional guidance
- Co-led experimental design and behavioral and eye-tracking data analysis

### How Context Changes Impacts Learning in Drinking Related Scenes in Young Drinkers

Texas A&M University – Learning and Attention Lab (PI: Brian Anderson, Collaborator: Sojung Youn) January 2025 – Present

- Investigate how prior experience with alcohol use shapes object–location learning in drinking-related environments
- Developed an eye-tracking paradigm to dissociate learning across drinking-associated and neutral contexts
- Co-led experimental design and behavioral and eye-tracking analyses

### Exploration and Context-Dependent Distractor Suppression

Texas A&M University – Learning and Attention Lab (PI: Brian Anderson) August 2025 – Present

- Investigate whether exploration facilitates statistical learning of distractor–location regularities in naturalistic scenes
- Developed eye-tracking paradigm to dissociate learning during task vs. post-search exploration
- Examine transfer of learned distractor associations to subsequent target-guided search
- Lead experimental design and behavioral and eye-tracking data analysis (manuscript in preparation)

### Independent Suppression of Multiple Salient Distractors

Texas A&M University – Learning and Attention Lab (PI: Brian Anderson; Collaborator: Brad Stilwell) November 2024 – Present

- Investigate suppression mechanisms across dynamic and static display contexts
- Contribute to experimental design, task implementation, and data analysis
- Presented at Psychonomic Society Annual Meeting 2025 (manuscript in preparation)

### **Saliency and Threat Detection in Fire Images**

Texas A&M University – Yorzinski Lab (PI: Jessica Yorzinski; Collaborator: Benjamin Lake) October 2024 – Present

- Investigate whether fire-related stimuli automatically capture attention in captive primates with no prior real-world fire exposure
- Apply computational saliency modeling (GBVS) and image segmentation to dissociate physical salience from threat-driven attentional capture (manuscript in preparation)

### **Statistical Learning in Attentional Guidance During Naturalistic Scene Search**

Texas A&M University – Learning and Attention Lab (PI: Brian Anderson) June 2023 – April 2026

- Examined how object–location statistical regularities are acquired and guide attention in real-world scenes
- Designed experiments, analyzed behavioral and eye-tracking data
- Resulted in peer-reviewed publication in JEP:LMC; presented at VSS (2024), ARMADILLO (2024), and VSS (2025).

### **Aversive Conditioning and Emotional Valence in Attentional Control**

Texas A&M University – Learning and Attention Lab (PI: Brian Anderson) November 2023 – November 2024

- Investigated how aversive conditioning and emotional valence interact to modulate attentional capture
- Contributed to experimental design, task development, and behavioral data analysis
- Presented at Psychonomic Society Annual Meeting 2024 (New York City)

### **Undergraduate Research Assistant**

University of Nebraska–Lincoln – VAMP Lab (PI: Michael Dodd) 2019 – 2023

- Contributed to multiple projects spanning attention, working memory, emotion processing, and perception
- Designed experimental procedures; collected and analyzed behavioral and EEG data in MATLAB and R
- Applied EEG methods including cap setup, data acquisition, and preprocessing
- Featured projects: working memory removal (EEG), emotion–color processing, environmental influences on cognition, auditory–emotional interactions
- Presented at UNL Spring Research Fair; featured in The Daily Nebraskan (September 2022)

### **Additional Research Contributions**

University of Nebraska–Lincoln

- Animal numeracy literature review: examined methodological biases in numerosity research across species (PI: Jeffrey Stevens)
- Eye movements in programming tasks: analyzed eye-tracking data, contributed to data cleaning and visualization in R (PI: Bonita Sharif)

## **CONFERENCE PRESENTATIONS**

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*Psychonomic Society Annual Meeting – Denver, CO, 2025*

Frandsen, J. L. & Anderson, B. A. (Poster). *Up to the challenge: Suppression of multiple salient distractors.*

*Vision Sciences Society Annual Meeting – St. Pete Beach, FL, 2025*

Frandsen, J. L. & Anderson, B. A. (Poster). *The role of scene context in the guidance of attention based on object–location associations.*

*Psychonomic Society Annual Meeting – New York City, NY, 2024*

Frandsen, J. L., Francesca, C., Ferrari, V., & Anderson, B. A. (Poster). *Relating aversive conditioning and emotional valence in the control of attention.*

ARMADILLO Conference – College Station, TX, 2024

Frandsen, J. L. & Anderson, B. A. (Poster). *The role of statistical learning in attentional guidance during search through naturalistic scenes.*

Vision Sciences Society Annual Meeting – St. Pete Beach, FL, 2024

Frandsen, J. L. & Anderson, B. A. (Poster). *The role of statistical learning in attentional guidance during search through naturalistic scenes.*

## AWARDS & FELLOWSHIPS

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Elizabeth Qualls Fellowship, Texas A&M University	June – August 2025
Undergraduate Creative Activities and Research Experience (UCARE) Award (3 years)	June 2020 – May 2023
College of Arts & Sciences Dean’s List	Fall 2019, Fall 2021
First Year Research Experience (FYRE) Award	September 2019 – May 2020

## TECHNICAL SKILLS

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**Statistical & Analysis:** R, Python, MATLAB, SPSS, JASP

**Eye-Tracking & Neuroimaging:** EyeLink 1000 setup & data analysis, EEG data collection and preprocessing

**Computational Methods:** GBVS saliency modeling, image segmentation

**Other:** Microsoft Office Suite, GitHub ([github.com/jfran2015](https://github.com/jfran2015))