

# Will Decker

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Last Update: September 19, 2023

## EDUCATION

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### Louisiana State University (LSU)

*Bachelor of Science, Psychology*

*Minor: German*

GPA: 3.8/4.0

**Thesis:** The Spatio-temporal Architecture of Auditory Statistical Learning

**Baton Rouge, Louisiana, USA**

*Aug. 2020 - May 2024*

## RESEARCH EXPERIENCE

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### Representations and Learning Lab

*Honors thesis student*

Department of Psychology, Louisiana State University

PI: Christopher R. Cox, PhD

- Develop clear research questions and hypotheses through self-lead literature reviews.
- Design and complete undergraduate honors thesis from start to finish using advanced neuro-scientific techniques (neuroimaging and computational), critical scientific thinking and writing.
- Learn and apply mathematical/statistical concepts/models from cognitive neuroscience.
- MRI safety trained.

**Baton Rouge, Louisiana, USA**

*Dec. 2022 - Present*

### Language, Environment and NeuroDevelopment (LEND) Lab

*Project Coordinator*

Department of Communication Sciences and Disorders, Louisiana State University

PI: Julie M. Schneider, PhD

- Create, execute and lead studies ranging in scientific topics that use EEG.
- Oversee team of undergraduate students learning and using EEG.
- Develop and implement analyses protocol and pipeline for EEG and functional magnetic resonance imaging (fMRI).
- Present research at internal, undergraduate and national level conferences and symposia.

**Baton Rouge, Louisiana, USA**

*May 2022 - Present*

### Language, Environment and NeuroDevelopment (LEND) Lab

*Research Assistant*

Department of Communication Sciences and Disorders, Louisiana State University

PI: Julie M. Schneider, PhD

- Administer language assessments (TOPEL, PPVT, DELV) to children between the ages of 3-5 years.
- Run participants taking part in behavioral language research.
- Code language transcriptions using Systematic Analysis of Language Transcripts (SALT)
- Build/set up EEG system and protocol from start to finish.

**Baton Rouge, Louisiana, USA**

*Sep. 2021 - May 2022*

## PUBLICATIONS

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### Submitted

1. Fan, T., **Decker, W.**, Schneider, J. M. (2023). The domain-general neural basis of auditory statistical learning in children. *Neurobiology of Language*.

### In progress

1. **Decker, W.**, Schneider, J. M. (registered report). When Reducing Noise in Developmental EEG Data, Is EEG Best Left Alone?

## PRESENTATIONS\*

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\*Denotes equal contribution

16. **Decker, W.**, Schneider, J. M., Cox, C. (2023, October). The architecture of auditory statistical learning in the brain: a dynamical functional connectivity study. **Poster** presented at the Society for the Neurobiology of Language's annual meeting. Marseille, France.
15. **Decker, W.**, Schneider, J. M. (2023, September). Is EEG really better left alone for developmental datasets. **Poster** presented at the annual meeting of the Society for Psychophysiological Research (SPR). New Orleans, Louisiana, USA.
14. **Decker, W.**, Schneider, J. M. (2023, July). Neural signal processing for developmental data. **Lightning talk** presented at the annual LSU Summer Undergraduate Research Forum (SURF). Baton Rouge, Louisiana, USA.
13. **Decker, W.**, Schneider, J. M. (2023, July). Is EEG really better left alone for developmental datasets. **Poster** presented at the annual LSU Summer Undergraduate Research Forum (SURF). Baton Rouge, Louisiana, USA.
12. **Decker, W.** (2023, April). Using neuroimaging to examine statistical learning. **Invited internal talk**. Louisiana State University, Baton Rouge, Louisiana, USA.
11. Carter, M.\*, **Decker, W.\***, Ferdaus, R.\*, George, K.\*, McDonald, J., Rivers, A.\*, Shoulders, B.\* (2023, April). Effects of note-taking methods on learning. **Poster** presented at the annual Louisiana State University Discover Day Research Symposium. Baton Rouge, Louisiana, USA.
10. Forest, M., Lopez, S., **Decker, W.**, Schneider, J. M. (2023, April). The role of vocabulary knowledge in linguistic encoding of motion events: an ERP study. **Poster** presented at the annual Louisiana State University Discover Day Research Symposium. Baton Rouge, Louisiana, USA.
9. Riley, W., **Decker, W.**, Haebig, E., Schneider, J. M. (2023, April). Learning novelties: the effects of rhyme, vocabulary, and processing speed on novel word learning in adults. **Poster** presented at the annual Louisiana State University Discover Day Research Symposium. Baton Rouge, Louisiana, USA.
8. **Decker, W.** (2023, April). A pipeline for developmental EEG data: an introduction. **Invited internal talk**. Louisiana State University. Baton Rouge, Louisiana, USA.
7. **Decker, W.**, Fan, T., Haebig, E., Schneider, J. M. (2023, March). Neural mechanisms of novel word learning through rhyme in adults. **Poster** presented at the Cognitive Neuroscience Society's Annual Meeting. San Francisco, California, USA.
6. Lopez, S.L., Forest, M. L., **Decker, W.**, Schneider, J. M. (2023, March). The influence of native language on motion event encoding: an ERP study. **Poster** presented at the Cognitive Neuroscience Society's Annual Meeting. San Francisco, California, USA.
5. Fan, T., **Decker, W.**, Schneider, J. M. (March 2023). Domain-specific neural profiles of statistical learning of speech and tone in young children. **Poster** presented at the Cognitive Neuroscience Society's Annual Meeting. San Francisco, California, USA.
4. **Decker, W.**, Haebig, E., Schneider, J. M. (2022, November). Anxiety and Word Learning in College Students. **Poster** presented at the annual University of Louisiana at Lafayette Undergraduate Research Conference. Lafayette, Louisiana, USA. DOI:<https://osf.io/GNM8J>
3. Forest, M., Lopez, S., **Decker, W.**, Schneider, J. M. (2022, November). The influence of grammar on perception of repeated motion events. **Poster** presented at the annual University of Louisiana at Lafayette Undergraduate Research Conference. Lafayette, Louisiana, USA.
2. Wyble, A., **Decker, W.**, Haebig, E., Schneider, J.M. (2022, November). Rhyme and reason: the effects of rhyme on retrieval from semantic memory. **Poster** presented at the annual University of Louisiana at Lafayette Undergraduate Research Conference. Lafayette, Louisiana, USA.
1. **Decker, W.**, Schneider, J.M. (2022, April). Choosing an EEG system: evaluating the pros and cons and quality of data among two different capping approaches. **Poster** presented at the annual Louisiana State University Discover Day Research Symposium. Baton Rouge, Louisiana, USA. DOI:<https://osf.io/6W4JF>

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## HONORS AND AWARDS

**Distinguished Undergraduate Research Candidate**  
LSU Discover Undergraduate Research Program, Louisiana State University

**LSU Discover Travel Award**  
LSU Discover Undergraduate Research Program, Louisiana State University

**Baton Rouge, Louisiana, USA**  
*May 2024*

**Baton Rouge, Louisiana, USA**  
*Oct. 2023*

## FUNDING

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### **LSU Discover Undergraduate Summer Research Grant**

**Baton Rouge, Louisiana, USA**

LSU Discover Undergraduate Research Program, Louisiana State University

*May 2023 - Aug. 2023*

Project title: A Universal Preprocessing-Pipeline for Event-Related Potentials (ERPs) in Developmental

Electroencephalography (EEG) Research.

Amount: \$3,000

## MEMBERSHIPS AND AFFILIATIONS

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### **Society for Psychophysiological Research**

*Student Member*

*Sep. 2023 - Present*

### **Society for the Neurobiology of Language**

*Student Member*

*May 2023 - Present*

### **Cognitive Neuroscience Society**

*Undergraduate Student Member*

*Dec. 2022 - Present*

## SKILLS AND OTHER

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**Language:** English (native), German (C1)

**Programming:** MATLAB, Python, R,  $\text{\LaTeX}$ , bash, **git**

## OPEN SCIENCE

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 **GitHub**

 **ORCID**

 **Open Science Framework**