

# Will Decker

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Last Update: January 8, 2024

## EDUCATION

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### Louisiana State University (LSU)

*Bachelor of Science, Psychology*

*Minor: German*

GPA: 3.8/4.0

**Thesis:** The Spatiotemporal 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 neuroscientific 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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### Under review

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. (October 2023). 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. (September 2023). 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. (July 2023). 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. (July 2023). 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.** (April 2023). 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.\* (April 2023). 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. (April 2023). 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. (April 2023). 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.** (April 2023). 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. (March 2023). 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. (March 2023). 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. (November 2022). 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. (November 2022). 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.

- Wyble, A., **Decker, W.**, Haebig, E., Schneider, J.M. (November 2022). 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.
- Decker, W.**, Schneider, J.M. (April 2022). 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>

## HONORS AND AWARDS

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|---|------------------------------------|
| 3. <b>Distinguished Undergraduate Research Candidate</b>                | <b>Baton Rouge, Louisiana, USA</b> |
| LSU Discover Undergraduate Research Program, Louisiana State University | <i>May 2024</i>                    |
| 2. <b>TAF Undergraduate Honors Thesis Scholarship</b>                   | <b>Baton Rouge, Louisiana, USA</b> |
| Tiger Athletic Foundation, Louisiana State University                   | <i>Oct. 2023</i>                   |
| 1. <b>LSU Discover Travel Award</b>                                     | <b>Baton Rouge, Louisiana, USA</b> |
| LSU Discover Undergraduate Research Program, Louisiana State University | <i>Oct. 2023</i>                   |

## FUNDING

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| 1. <b>LSU Discover Undergraduate Summer Research Grant</b>  | <b>Baton Rouge, Louisiana, USA</b> |
| LSU Discover Undergraduate Research Program, Louisiana State University   | <i>May 2023 - Aug. 2023</i>        |
| 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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| <b>Society for Psychophysiological Research</b> |                            |
| <i>Student Member</i>                           | <i>Sep. 2023 - Present</i> |
| <b>Society for the Neurobiology of Language</b> |                            |
| <i>Student Member</i>                           | <i>May 2023 - Present</i>  |
| <b>Cognitive Neuroscience Society</b>           |                            |
| <i>Undergraduate Student Member</i>             | <i>Dec. 2022 - Present</i> |

## SKILLS AND OTHER

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

**Programming and Technical:** MATLAB, Python, R, L<sup>A</sup>T<sub>E</sub>X, bash, **git**

## OPEN SCIENCE

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 **GitHub**

 **ORCID**

 **Open Science Framework**