

Grace Olive Lawley

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INTERESTS

- Computational Linguistics
- Natural Language Processing
- Speech and Language Disorders
- Discrete Mathematics
- Statistics
- Data Science

SKILLS

- R, Python
- Git/GitHub
- R Markdown
- Data Analysis
- Data Wrangling
- Data Visualization

CONTACT

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EDUCATION

PHD CANDIDATE, COMPUTER SCIENCE & ENGINEERING | OREGON HEALTH & SCIENCE UNIVERSITY (OHSU)

Expected September 2023 • Portland, OR

- Advisor: Steven Bedrick, PhD 📧 // (previously Jan van Santen, PhD 📧)

BA, MATHEMATICS | LEWIS & CLARK COLLEGE

May 2017 • Portland, OR

- Advisor: Paul T. Allen, PhD 📧

RESEARCH EXPERIENCE

GRADUATE RESEARCH ASSISTANT | CENTER FOR SPOKEN LANGUAGE UNDERSTANDING, OHSU

Sept 2017 - Present

- Participating in NIH funded research on Autism Spectrum Disorder, Fragile X Syndrome, and Down Syndrome.
- R01DC012033: Automated Measurement of Language Outcomes for Neurodevelopmental Disorders 📧

RESEARCH INTERN | CENTER FOR SPOKEN LANGUAGE UNDERSTANDING, OHSU

Jan 2017 - June 2017 • June 2016 - Aug 2016

- Analyzed transcribed interviews with children with Autism and developed an automated method to detect and quantify atypical word usage using natural language processing techniques.
- Participated in Autism Spectrum Disorder research under the supervision of Jan van Santen.

INDUSTRY EXPERIENCE

DATA SCIENCE MENTOR | POSIT ACADEMY, POSIT

August, 2022 - Present

- Mentor small groups of working professionals as they develop and hone their data science skills using either R or Python. 📧
- Assist the Academy content development team in translating and adapting prior course material from R into Python.

WORKSHOP COORDINATOR | RSTUDIO::CONF(2020) • RSTUDIO

Jan 27-28, 2020 • Applied Machine Learning Workshop

Responsible for course logistics of a two-day, 180-person workshop. Duties included resolving technical issues, being the point person for student questions, and acting as the intermediary between the workshop teaching staff and the rstudio::conf(2020) coordinators.

INTERN | EDUCATION TEAM, RSTUDIO



June 2019 - Sept 2019

Worked with Alison Hill 📧 to create an updated bookdown version of Jenny Bryan's 📧 STAT 545, a data science course originally taught at the University of British Columbia. The course materials are now available as an online textbook created with the R bookdown package and can be used as a resource for both self-guided learners and educators. With over 40 chapters of content, STAT 545 teaches skills for data wrangling, exploration, and analysis in R, from how to read data into R to how to create an R package. 📧

TEACHING EXPERIENCE



WORKSHOP TEACHING ASSISTANT | RSTUDIO::CONF(2020) • RSTUDIO

Jan 27-28, 2020 • Applied Machine Learning Workshop

Assisted in a two-day, 180-person workshop on applied machine learning in R. Participants learned how to use the tidymodels packages  to build, tune, visualize, and assess various predictive models. 



WORKSHOP TEACHING ASSISTANT | RSTUDIO::CONF(2019) • RSTUDIO

Jan 15-16, 2019 • What They Forgot to Teach You About R Workshop

Assisted in a two-day, hands-on workshop on project-orientated workflows, version control with Git & GitHub, debugging, personal R administration, and iterating with the purrr package.  

GRADUATE TEACHING ASSISTANT | OREGON HEALTH & SCIENCE UNIVERSITY

June 2018 - Sept 2018 • Introduction to Biostatistics for the Basic Sciences (CONJ 620)

Assisted in a course on data wrangling, statistical analysis, data visualization, and communication of biomedical data using the programming language R for graduate students.  

PUBLICATIONS

JOURNAL ARTICLES

- [1] H. MacFarlane, A. C. Salem, S. Bedrick, J. K. Dolata, J. Wiedrick, G. O. Lawley, L. H. Finestack, S. T. Kover, A. J. Thurman, L. Abbeduto and E. Fombonne, 'Consistency and reliability of automated language measures across expressive language samples in autism', Autism Research, pp. 1–15, 2023. DOI: 10.1002/aur.2897.
- [2] G. O. Lawley, S. Bedrick, H. MacFarlane, J. K. Dolata, A. C. Salem and E. J. Fombonne, "'Um" and "Uh" Usage Patterns in Children with Autism: Associations with Measures of Structural and Pragmatic Language Ability', Journal of Autism and Developmental Disorders, 2022. DOI: 10.1007/s10803-022-05565-4.
- [3] A. C. Salem, H. MacFarlane, J. R. Adams, G. O. Lawley, J. K. Dolata, S. Bedrick and E. J. Fombonne, 'Evaluating atypical language in autism using automated language measures', Scientific Reports, vol. 11, no. 1, 2021. DOI: 10.1038/s41598-021-90304-5.

CONFERENCE PROCEEDINGS


- [4] G. O. Lawley, S. Bedrick and E. Fombonne, 'Sex Differences in Pronoun and Maze Usage in the Language of Children with Autism Spectrum Disorder', in International Society for Autism Research Annual Meeting, INSAR, Austin, TX, May 2022.
- [5] G. O. Lawley, S. Bedrick, J. K. Dolata and E. J. Fombonne, 'Investigation on Examiner "Um" and "Uh" Usage in ADOS-2 Sessions', in International Society for Autism Research Annual Meeting, INSAR, May 2021.
- [6] A. C. Salem, H. MacFarlane, J. Adams, G. O. Lawley, J. K. Dolata, S. Bedrick and E. J. Fombonne, 'Evaluating Atypical Language in Autism Using Automated Discourse Measures', in International Society for Autism Research Annual Meeting, INSAR, May 2021.
- [7] A. C. Salem, H. MacFarlane, J. K. Dolata, G. O. Lawley and E. J. Fombonne, 'Using MLU to Evaluate the Reliability of ADOS Transcription', in International Society for Autism Research Annual Meeting, INSAR, Jun. 2020.

BOOK CHAPTERS


- [8] H. MacFarlane, A. C. Salem, G. O. Lawley, A. Presmanes Hill, K. Zuckerman and E. J. Fombonne, Epidemiology. In: Textbook of Autism Spectrum Disorders, 2nd, E. Hollander, R. J. Hagerman and C. J. Ferretti, Eds. American Psychiatric Association Publishing, 2022, ch. 1, pp. 5–33.

TALKS & PANELS

"PEDANTIC SPEECH IN CHILDREN WITH AUTISM SPECTRUM DISORDER" | DEPARTMENT TALK

May 2019 • Center for Spoken Language Understanding, OHSU • 

"MATH MEETS DATA" | INVITED SPEAKER

Apr 2019 • Lewis & Clark College • Mathematical Sciences Colloquium • 

STEM GRADUATE SCHOOL EXPERIENCE PANEL | INVITED PANELIST

Apr 2019 • Lewis & Clark College • Gender Minorities in STEM (GemSTEM) Club

"A SENTIMENT ANALYSIS OF CHILD LANGUAGE ACQUISITION DATA" | INVITED SPEAKER

Aug 2018 • Portland R User Group • OHSU Data Viz Lab Talk Nights • 

CERTIFICATIONS

RSTUDIO CERTIFIED INSTRUCTOR | TIDYVERSE

November 2019 - Present • 

AWARDS & HONORS

PROMISING SCHOLAR AWARD | \$1,000

May 2017 • Oregon Health & Science University

MILLER INTERNSHIP AWARD | \$4,600

Summer 2016 • Lewis & Clark College

PROFESSIONAL MEMBERSHIPS & AFFILIATIONS

- Pi Mu Epsilon (US Honorary National Mathematics Society)
- Women in Science Portland
- R-Ladies PDX

ADDITIONAL EXPERIENCE

CAMP ODAKODA BY ASD OREGON | CABIN COUNSELOR

Aug 2018 • Sisters, OR

Worked as a cabin counselor at a five-day-long overnight summer camp for children with high functioning Autism Spectrum Disorder. 