

KATHY SEM

Curriculum Vitae 5/2026

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EDUCATION

Ph.D. Psychology – Developmental Science **May 2026**
 Boston University
Department of Psychological and Brain Sciences

Dissertation: *Elucidating Biobehavioral Risk Factors for Anxiety in Early Childhood*
 Faculty Advisor: Dr. Nicholas Wagner

M.A. Psychology – Developmental Science **May 2023**
 Boston University
Department of Psychological and Brain Sciences
 Faculty Advisor: Dr. Nicholas J. Wagner

B.S. Psychology – Honors **2014 – 2018**
 Michigan State University
Department of Psychology

Honor's Thesis: *The Relationship Between Anxiety and Error-Related Brain Activity Across Childhood and Adolescence*
 Faculty Advisors: Dr. Jason S. Moser & Dr. C. Emily Durbin

HONORS & AWARDS

Center for Innovation in Social Science (CISS)/Spark!	2025
Clara Mayo Award – Boston University Scholarship Award	2025
International Society for Developmental Psychobiology (ISDP) – Travel/Abstract Award	2024
Society for Research in Child Development (SRCD) – Travel Award	2023
International Society for Development Psychobiology (ISDP) – Travel/Abstract Award	2022
Graduate with Honors Distinction – Michigan State University	2018
Swanson/Northrup Award Scholarship – Michigan State University	2017 – 2018
Michigan Competitive Scholarship – Michigan State University	2015 – 2017

PUBLISHED PAPERS

Wagner, N.J., Shakiba, N., Bui, H.N.T., Novick, D.R., **Sem, K.**, Danko, C.M., Rubin, K.R., & Chronis-Tuscano, A. (2025). Children's vagal flexibility is a predictor and moderator of treatment response to early parenting interventions for inhibited youth.

Shakiba, N., Bui, H.N.T., **Sem, K.**, Rubin, K.H., Novick, D. R., Danko, C.M., Chronis-Tuscano, A., & Wagner, N.J (2024). Dyadic physiological concordance as a neurobiological marker of sensitivity to parenting behaviors among behaviorally inhibited children.

Vogel, S. C., Murgueitio, N., Huth, N., **Sem, K.**, Knickmeyer, R. C., Short, S. J., Mills-Koonce, R., Propper, C., Wagner, N. J. (2025). Longitudinal associations between the infant gut microbiome and negative affect in toddlerhood. *Development and Psychopathology*, 1-13. doi:10.1017/S0954579425100229

- Sem, K.,** Shakiba, N., Rubin, K.H., Novick, D.R., Druskin, L.R., Smith, K., Danko, C.M., Chronis-Tuscano, A., & Wagner, N.J. (2024). Associations between dyadic language style matching and classroom observations of behaviorally inhibited children's sociability. *Social Development*
- Wagner, N. J., Shakiba, N., Bui, H. N., Novick, D., **Sem, K.,** Danko, C. M., ... & Chronis-Tuscano, A. (2024). Children's vagal flexibility is a predictor and moderator of treatment response to early parenting interventions for inhibited youth. *International Journal of Behavioral Development*, 01650254241306118.
- Wagner, N., Perkins, E., Rodriguez, Y., Ordway, C., Flum, M., Hernandez-Pena, L., Perelstein, P., **Sem, K.,** ... & Waller, R. (2023). Promoting Empathy and Affiliation in Relationships (PEAR) study: protocol for a longitudinal study investigating the development of early childhood callous-unemotional traits. *BMJ open*, 13(10), e072742.
- Wagner, N. J., Shakiba, N., Bui, H. N., **Sem, K.,** Novick, D. R., Danko, C. M., ... & Rubin, K. H. (2023). Examining the relations between children's vagal flexibility across social stressor tasks and parent-and clinician-rated anxiety using baseline data from an early intervention for inhibited preschoolers. *Research on Child and Adolescent Psychopathology*, 51(8), 1213-1224.

PAPERS UNDER REVIEW

- Sem, K.,** Huth, N., Ordway, C., Rubin, K.H., Novick, D. R., Druskin, L.R., Smith, K., Danko, C. M., Chronis-Tuscano, A., & Wagner, N.J. (under review). Parent anxiety moderates the association between parent-child language style matching (LSM) and children's anxiety intervention outcomes.
- Sem, K.,** Waller, R., & Wagner, N.J. (in prep). A Computer Vision Approach to Assessing Children's Fear Behaviors Related to Anxiety.

INVITED TALKS/CONFERENCE PRESENTATIONS

- Sem, K.,** Waller, R., & Wagner, N.J. (2025, October). *Validating a Computer Vision Approach to Assessing Children's Fear Behaviors* [Presentation]. Boston University Developmental Science Colloquium, Boston, MA.
- Sem, K.,** Huth, N., Vogel, S., Rubin, K.H., & Wagner, N.J. (2024, October). *A Machine Learning Approach to Identifying Predictors of Children's Anxiety During COVID-19* [Presentation]. Boston University Developmental Science Colloquium, Boston, MA.
- Sem, K.,** Shakiba, N., Vogel, S., Ordway, C., Bui, H.N.T., Novick, D.R., Druskin, L., Chronis-Tuscano, A., Rubin, K.H., & Wagner, N.J. (2024, October). *Parent's Cross-System Autonomic Regulation (CSAR) Predicts Fewer Restrictive Parenting Behaviors* [Flash Talk]. International Society for Developmental Psychobiology (ISDP), Chicago, IL.
- Vogel, S.C., Murgueitio, N., Huth, N., **Sem, K.,** Knickmeyer, R., Short, S.J., Quinn, R., Mills-Koonce, R., Propper, C., Wagner, N.J. *Longitudinal links between the gut microbiome and negative affect in toddlerhood: the impact of developmental timing in gut-behavior associations* [Symposium]. International Society for Developmental Psychobiology, Chicago, IL
- Sem, K.,** Shakiba, N., Rubin, K.H., Novick, D. R., Druskin, L.R., Smith, K., Danko, C. M., Chronis-Tuscano, A., & Wagner, N.J. (2024, March). *Anxious Parent-Child Language Style Matching (LSM) Predicts Increased Behavioral Inhibition (BI) Post-Intervention* [Paper Presentation]. Eastern Psychological Association (EPA), Philadelphia, PA.
- Sem, K.,** Shakiba, N., Bui, H.N.T, Novick, D. R., Danko, C. M., Chronis-Tuscano, A., & Wagner, N.J. (2023, March). *Examining Links Between Parent-Child Language Style Matching (LSM) and Observed Social Behaviors Using Pre-Treatment Data from an Early Intervention for Inhibited Preschoolers* [Flash talk].

Society for Research in Child Development (SRCD), Salt Lake City, UT.

- Shakiba, N., Novick, D. R., **Sem, K.**, Bui, H.N.T., Danko, C. M., Druskin, L., Rubin, K. H., Chronis-Tuscano, A., & Wagner, N.J. (2023, March). *RSA Synchrony as a Neurobiological Marker of Susceptibility to Parenting Behaviors among Behaviorally Inhibited Preschoolers* [Flash talk]. Society for Research in Child Development (SRCD), Salt Lake City, UT.
- Sem, K.**, Shakiba, N., Bui, H.N.T, Novick, D. R., Danko, C. M., Chronis-Tuscano, A., Rubin, K. H., & Wagner, N. J. (2023, March) *Links between Language Style Matching and Inhibited Children's Social Competence among Familiar and Unfamiliar Peers* [Symposium Talk]. Eastern Psychological Association (EPA), Boston, MA.
- Sem, K.**, Shakiba, N., Bui, H.N.T, Novick, D. R., Danko, C. M., Chronis-Tuscano, A., Rubin, K. H., & Wagner, N. J. (2023, January) *Children's RSA Moderates the Effects of Restrictive Parenting on Children's Anxiety* [Research Talk]. Developmental Sciences Prospective Student's Day Research Talk. Boston, MA.
- Sem, K.**, Shakiba, N., Bui, H.N.T, Novick, D. R., Danko, C. M., Chronis-Tuscano, A., Rubin, K. H., & Wagner, N. J. (2022, November). *Language Style Matching and Social Competence* [Presentation]. Boston University Developmental Science Colloquium, Boston, MA.
- Wagner, N. J., Shakiba, N., Bui, H.N.T., **Sem, K.**, Novick, D. R., Danko, C. M., Chronis-Tuscano, A., & Rubin, K. H. (2022, November). *Examining the Relations between Preschool Children's Vagal Flexibility Across Social Stressor Tasks and Parent- and Clinician-Rated Anxiety* [Paper Presentation]. International Society for Developmental Psychobiology (ISDP), San Diego, CA.

CONFERENCE POSTER PRESENTATIONS

- Bailey, M., **Sem, K.**, Rubin, K.H., Chronis-Tuscano, A., & Wagner, N.J. (2026, February). *Associations between Parenting and Parent's Physiology Regulation* [Poster]. Eastern Psychological Association (EPA), Boston, MA.
- Sem K.**, Vogel, S., Huth, N., Waller, R., & Wagner, N.J. (2025, November). *Second-By-Second RSA And Observed Fear Behaviors in the Prediction Of Child Anxiety* [Poster]. International Society for Developmental Psychobiology (ISDP), San Diego, CA.
- Sem, K.**, Ordway, C., Shakiba, N., Novick, D. R., Druskin, L.R., Danko, C. M., Chronis-Tuscano, A., Rubin, K.H., & Wagner, N.J. (2025, May). *Anxious-Parent & Child Language Style Matching (LSM) on Child Intervention Anxiety Outcomes* [Poster]. Society for Research in Child Development (SRCD), Minneapolis, MN.
- Sem, K.**, Shakiba, N., Ordway, C., Novick, D. R., Druskin, L.R., Smith, K., Danko, C. M., Chronis-Tuscano, A., Rubin, K.H., & Wagner, N.J. (2024, March). *Anxious-Parent & Child Language Style Matching (LSM) on Child Intervention Anxiety Outcomes* (Under Review). Society for Research in Child Development. (SRCD). Minneapolis, Minnesota.
- Sem, K.**, Shakiba, N., Vogel, S., Ordway, C., Bui, H.N.T., Novick, D.R., Druskin, L., Chronis-Tuscano, A., Rubin, K.H., & Wagner, N.J. (2024, October). *Parent's Cross-System Autonomic Regulation (CSAR) Predicts Fewer Restrictive Parenting Behaviors* [Poster]. International Society for Developmental Psychobiology (ISDP), Chicago, IL.
- Perelstein, P., Shakiba, N., **Sem, K.**, Aslan, O.M., Boz, M., Verissimo, M., Closson, L., Oh, W., Bowker, J., McDonald, K., Coppola, G., Liga, F., LoCoco, A., Kim, H.K., Ren., L, Rubin, K., Wagner, N.J. (2024, March). *Parenting practices and child emotion regulation over three months of the pandemic; the moderating role of cultural tightness* [Poster]. Eastern Psychological Association (EPA), Philadelphia,

PA.

Sem, K., Shakiba, N., Bui, H.N.T, Novick, D. R., Danko, C. M., Druskin, L., Chronis-Tuscano, A., Rubin, K. H., & Wagner, N. J. (2022, November). *Less Restrictive Parenting Protects Against Anxiety for Children with High Resting RSA* [Poster]. International Society for Developmental Psychobiology (ISDP), San Diego, CA.

Sem, K., Shakiba, N., Bui, H.N.T, Novick, D. R., Danko, C. M., Druskin, L., Chronis-Tuscano, A., Rubin, K. H., & Wagner, N. J. (2022, November). *Associations between Parent-Child Language Style Matching (LSM) And Parent Skin Conductance Response (SCR)* [Poster]. International Society for Developmental Psychobiology (ISDP), San Diego, CA.

Shakiba, N., **Sem, K.**, Bui, H.N.T., Novick, D. R., Danko, C. M., Druskin, L., Dougherty, L. R., Rubin, K. H., Chronis-Tuscano, A., & Wagner, N. J. (2022, November). *Examination of moderators of treatment response in the context of early intervention for behaviorally inhibited young children* [Poster]. International Society for Developmental Psychobiology (ISDP), San Diego, CA.

Sem, K., Winters, A., Lind, B., Moser, J. (2021, October). *Error-Related ERPs Do Not Mediate the Relationship Between Parenting and Anxiety In Older Children* [Poster]. Society for Psychophysiological Research (SPR), Virtual.

Lind, B., Moros, J., **Sem, K.**, Gloe, L., Durbin, C., Moser, J. (2021, October). *Age Does Not Moderate the Relationship Between Depression Symptoms and the Reward Positivity in Youth.* [Poster]. Society for Psychophysiological Research (SPR), Virtual.

Sem, K., Winters, A., Durbin, C., & Moser, J. (2021, May). *Association Between Parenting and Error Monitoring Functions* [Poster] Association for Psychological Sciences (APS), Virtual.

Sem, K., Winters, A., Moser, J., Durbin, C. (2021, April). *Youth Anxiety and Internalizing Symptoms: Correlations with Perceived Parenting Behavior and Error-Related Brain Potentials* [Poster]. Society for Research in Child Development (SRCD), Virtual.

Lin, Y., Fisher, M. E., Peng, L. W., Dewitt, S., Foster, K., Wright, M., Eckerle, W., **Sem, K.**, & Moser, J. S. (2018, May). *Clarifying the relationship between mindfulness and executive attention: A multimodal electrophysiological study* [Poster]. Association for Psychological Sciences (APS), San Francisco, CA.

Sem, K., Rothschild, L., Louis, C., & Moser, J. (2018, May). *Examining Whether Age Moderates the Relationship Between Anxiety and the ERN in Youth* [Poster]. Association for Psychological Science (APS), San Francisco, CA.

Jamgotch, S., **Sem, K.**, Tripathi, A., Waldron, A., & Coursaris, C. (2016, April). *The Interplay of Consumer Personality and Tweet Content on the Intention to Purchase Music from Emerging American Artists* [Poster]. University Undergraduate Research and Arts Forum (UURAF), East Lansing, MI.

RESEARCH APPOINTMENTS

Project Lead

1/2025 – Present

Center for Innovation in Social Sciences (CISS)/ Boston University Spark!
Boston University, CISS/Spark!

Identifying Children’s “Stranger Danger” Behaviors – Pilot Grant

PI: Kathy Sem

- Research Questions
 - Psychometric evaluation of AI-computer vision trained child fear assessment
 - Intensive longitudinal modeling of second-by-second behaviors and physiology reactivity
- Mentorship

- Developed and led the translation of traditional behavioral coding methodologies into automated computer vision and machine learning models to enable scalable objective, and reproducible behavioral measurement
- Led weekly meeting with interdisciplinary teams of data scientists, project managers, and psychologists to assess and strengthen the reliability and validity of a novel AI-based behavioral assessment model
- Mentored undergraduate research projects to train and learn behaviorally coding, and R for analyses using computer-vision derived fear behaviors to predict child outcomes

Graduate Researcher

9/2021 - Present

Biobehavioral and Social-Emotional Development Lab (BASE)

Boston University, Department of Psychological & Brain Sciences

Promoting Empathy and Affiliation in Relationships (PEAR Grant)

PI: Dr. Rebecca E. Waller, & Dr. Nicholas J. Wagner

- Research Questions
 - Exploring machine learning methods to elucidate the most influential predictors of child anxiety across multiple contexts of influence
 - Exploring within-child changes in coordinated joint physiological activity (RSA, EDA, PEP) across a series of stress and rest tasks
 - Exploring the interaction of parent and child language style matching (LSM) and affiliation in predicting children's anxiety
- Data Pipelines
 - Developed standardized protocols for collecting and analyzing electrodermal activity (EDA), electrocardiogram (ECG), cardiac impedance (PEP), and respiration for adults and young children using the Biopac's Bionomadix MP160 System and AcqKnowledge
 - Conceptualized protocol for automatic speech recognition (ASR) using Azure and Whisper to transcribe over 450 videos of parents and preschoolers interacting
 - Developing protocol for tagging transcribed conversations to be imported into Linguistic Inquiry and Word Count (LIWC) software to explore psychosocial linguistic constructs quantitatively

Examining Neurophysiological Predictors of Treatment Response to a Multi-Component Early Intervention for Socially Inhibited Preschoolers (TURTLE Grant)

PI: Dr. Andrea Chronis-Tuscano, Dr. Kenneth H. Rubin, & Dr. Nicholas J. Wagner

- Research Questions
 - Exploring dyadic between person physiology synchrony as a mechanism contributing to intergenerational transmission of anxiety
 - Dyadic synchrony as a maladaptive mechanism for anxiety transmission in contexts of parent anxiety
- Physiology Data
 - Developed and optimized standardized protocol for analyzing EDA using Biopac's AcqKnowledge software
 - Trained and supervised research assistants on EDA data processing using Acqknowledge software to process of over 150 physiology files to compiled clean data sets for analysis
- Language
 - Oversaw transcription and coding of over 150 parent and child language files
 - Trained and oversaw a small group of research assistants in processing qualitative language data into quantitative psychosocial constructs using the Linguistic Inquiry and Word Count (LIWC) softwares (v15 & v22)
 - Explored and implemented new Language Style Matching module into existing research projects to answer questions regarding dyadic physiology and behavioral synchrony

Grant Coordinator

2/2021 – 7/2021

Clinical Psychophysiology Lab (CPL)
 Michigan State University, Department of Psychology

Kid Power Camp

PI: Dr. Kate D. Fitzgerald, Dr. Kate Rosenblum, & Dr. Jason S. Moser

- Set up IRB at the University of Michigan and Michigan State University to study effortful control intervention camps with anxious children
- Created and designed recruitment and study materials, developed data management systems to increase efficiency of data organization and collection
- Trained and managed research assistants on learning electroencephalogram (EEG) set-up procedures, neuropsychological assessments, qualitative and quantitative data methods, and behavior management

Grant Coordinator & Lab Manager

7/2018 – 1/2021

Clinical Psychophysiology Lab & Child Emotions Lab
 Michigan State University, Department of Psychology

Michigan Longitudinal Study

PI: Dr. C. Emily Durbin & Dr. Jason S. Moser

- Recruited, collected, and managed data from 350 research participants (adults and children) for the Michigan Longitudinal Study R01 grant to study the relationship between child and parent behavior, temperament, psychopathology, and brain activity over the span of 3 years
- Designed recruitment and study protocol for additional grant extension, and developed new data management systems using VBA and JavaScript to increase efficiency of data organization and collection
- Trained and managed over 50 research assistants on learning electroencephalogram (EEG) set-up procedures and child assent, neuropsychological assessments, and behavior management

Research Assistant

1/2017– 7/2018

Clinical Psychophysiology Lab & Child Emotions Lab
 Michigan State University, Department of Psychology

- Conducted EEG to collect psychophysiological data from participants (children, adolescents, and adults) as a lead and secondary experimenter
- Monitored EEG data collection using ActiView and recorded experiment conditions to ensure accurate recordings
- Cleaned, tested, logged, and organized all EEG equipment to ensure accurate readings

Michigan Longitudinal Study

5/2017– 7/2018

PI: Dr. C. Emily Durbin & Dr. Jason S. Moser

- Developed new data management systems using macros to increase efficiency of data organization
- Trained and monitored new research assistants on electroencephalogram usage and data collection
- Organized and managed EEG and behavioral data using E-prime, BrainVision Analyzer, SPSS, MATLAB, and Excel
- Recorded and observed child temperament laboratory assessments

Brain Cycle Study

1/2017– 7/2018

PI: Dr. Kelly L. Klump & Dr. Jason S. Moser

- Studied how behavior and hormones affect psychopathology in naturally menstruating women
- Recruited and screened for eligible participants through phone interviews
- Created and prepared saliva collection sample kits and participant materials

Nondeceptive Placebo Study

3/2017 – 5/2017

Dissertation: Darwin A. Guevarra

- Study susceptibility of emotion on nondeceptive placebos
- Prepared participant scripts, saline nasal solutions, and ActiView/E-Run software

TEACHING & MENTORING EXPERIENCE

Graduate Mentoring	9/2021 – Present
Biobehavioral and Social-Emotional Development Lab	
<u>Senior/Master's Thesis</u>	
• Huynh Huynh	Spring 2026
• Rutva Bhatt	Fall 2022 – Spring 2023
<u>Undergraduate Research Opportunities Program (UROP)</u>	
Funded Applications:	
• Giselle Perez	Spring 2026
• Kayla Edinhart	Spring 2025
• Kayla Ji	Summer 2024
• Krishi Shah	Spring 2024
• Tori Keefauver	Spring 2023
• Rutva Bhatt	Summer 2022
• Tori Keefauver	Spring 2022
<u>Directed Study</u>	
• Afiya Bentinck	Fall 2025
• Kayla Edinhart	Fall 2024
Guest Lecturer	
<u>Methodology of Psychophysiological Experiments (PSYE402)</u>	10/24/2024
New Bulgarian University Sofia, Bulgaria	
Instructor: Mihaela Barokova, Ph.D.	
Guest Lecture: <i>How We Use The Body To Measure The Mind</i>	
<u>Emerging Research in Developmental Psychopathology (PS138A)</u>	1/25/2024
Colby College, Department of Psychology Waterville, Maine	
Instructor: Sarah Lynch, M.A.	
Guest Lecture: <i>Anxious Parent-Child Language Style Matching & Children's Behavioral Inhibition After Treatment Intervention</i>	
<u>Emerging Research in Developmental Psychopathology (PS138A)</u>	1/23/2023
Colby College, Department of Psychology Waterville, Maine	
Instructor: Sarah Lynch, M.A.	
Guest Lecture: <i>Children's RSA Moderates the Effects of Restrictive Parenting on Children's Anxiety</i>	
Graduate Teaching Fellow	Fall 2021 - Present
<i>Department of Psychological & Brain Sciences</i> Boston University	
<u>Introduction to Experimental Design (PS211)</u>	Fall 2024 Spring 2026

Instructor: Chloe Jordan, Ph.D.

Introduction to Psychology (PS101)

Spring 2025

Instructor: Martha C. Tompson, Ph.D.

Introduction to Psychology (PS101)

Spring 2022

Instructor: David Shim, Ph.D.

Introduction to Psychology (PS101)

Fall 2021

Instructor: Barack Caine, Ph.D.

Undergraduate Teaching Assistant

Fall 2017 – Spring 2018

Department of Psychology

Michigan State University

Brain and Behavior (PSY 209)

Spring 2018

Instructor: Alexa Veenema, Ph.D.

Introduction to Psychology (PSY 101)

Fall 2017

Instructor: Johnathan Weaver, Ph.D.

SERVICES

Graduate Student Coordinator

09/2022 – 05/2026

Prospective Students Day Committee

Boston University, Developmental Sciences

- Coordinated all communications between interviewees and interviewers
- Planned, purchased, and personalized prospective students' welcome packages
- Organized and scheduled prospective student and faculty interview links/locations and schedules
- Hosted and directed all interview events including social nights, interview meetings, group meetings, and group social

Volunteer Student Tutor

10/2019 – 12/2019

Refugee Development Center

Lansing School District, Michigan

- Worked with refugee students weekly from the Lansing public school districts to help them assimilate to living in the United States
- Lead after-school math and writing tutoring sessions for elementary, middle, and high school refugee students

ADVANCED RESEARCH TRAINING

Machine Learning: Theory and Applications Workshop

Summer 2025

CenterStat

Instructor: Dr. Doug Steinley, Ph.D.

MindWare Data Analysis Training

Spring 2025

Mindware

Instructor: AnnMarie Huet, M.S.

Introduction to Cardio Suite

June, 2024

CardioBatch Plus Synchrony

Instructors: Dr. Keri Heilman, Ph.D.

Data Science and Statistical Modeling in R

Spring 2024

Department of Biostatistics
Boston University

<u>Introduction to Cardio Suite</u> CardioBatch Plus Synchrony Instructors: Dr. Keri Heilman, Ph.D.	March, 2024
<u>Introduction to R Statistical Programming</u> Department of Biostatistics Boston University	Fall 2023
<u>Advanced Quantitative Methods</u> Department of Psychological & Brain Sciences Boston University	Spring 2023
<u>EDA Introduction: Tools & Strategies to Optimize Data</u> BIOPAC System, Inc.	July, 2022
<u>Measuring the Emotional State of Guilt Using Eye Tracking, EDA/GSR & fMRI</u> BIOPAC Systems, Inc.	March, 2022
<u>Introduction to Structural Equation Modeling</u> University of North Carolina at Chapel Hill Instructors: Dr. Dan Bauer, Ph.D. & Dr. Patrick Curran, Ph.D.	May, 2022

PROFESSIONAL ACTIVITIES

Eastern Psychological Association (EPA)	Graduate Student Member
International Society for Developmental Psychobiology (ISDP)	Student Member
Society for Psychophysiological Research (SPR)	Student Member
Society for Research in Child Development (SRCD)	Graduate Student Member
Association for Psychological Science (APS)	Student Member

RELEVANT SKILLS

Statistical Methods

- Tests: t-tests (one-sample, independent, paired), ANOVA (one & two-way, repeated), Chi-Square Test, Correlation
- Regression: Simple linear regression, logistic regression, generalized linear models (GLMs)
- Multivariate: Multiple linear regression, exploratory (EFA) and confirmatory factor analysis (CFA)
- Hierarchical & Longitudinal: Multilevel modeling (linear, generalized linear, random effects), mixed-effects models (linear, non-linear), latent growth & basis models, growth mixture models, lagged time-series
- Non-parametric: Spearman's rank correlation, bootstrapping and resampling methods
- Specialized methods: Structural equation modeling (SEM), mediation analysis, moderation analysis
- Machine Learning: Unsupervised (K-means clustering, Hierarchical Clustering, PCA), Supervised (Random forest, XGboost, SHAP)

Data Analysis & Scripting

- R, Mplus, SPSS, Python

Psychophysiology

- ECG: Acqknowledge, Biopac MP160 (Bionomadix RSPEC, Bionomadix NICO), QRSTools, MindWare
- EDA: Biopac MP160 (Bionomadix PPGED), MindWare
- EEG: BioSemi ActiveTwo EEG, BioSemi ActiView, BrainVision Analyzer 2.0
- Eye-tracking: Eyelink 1000 Plus, Pupil Labs
- Behavioral Task: E-Studio 2.0 & 3.0 (E-Run, E-Prime, E-Merge, E-Recovery)

Technical Skills

- Microsoft Office Suite: Excel, Word, Outlook, PowerPoint, OneNote, Publisher, Access
- Google Suite: Sheets, Docs, App Scripts, Forms, Slides