

Jessica M. Kilmer

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EDUCATION

Virginia Polytechnic and State University, Blacksburg, VA Expected May 2030
Doctor of Philosophy in Clinical Science

James Madison University, Harrisonburg, VA Conferred May 2023
B.S. in Psychology, Minor in Biology, Neuroscience Concentration
 Major GPA: 3.97
 Minor GPA: 3.77
 Cumulative GPA: 3.91; *summa cum laude*

ACADEMIC & RESEARCH EXPERIENCE

Mental State Processing and Psychopathology Lab August 2025 – Present
Virginia Polytechnic Institute and State University, College of Science, Department of Psychology

- **Position:** Doctoral Student, Graduate Research Assistant
- **Supervisor:** Chloe C. Hudson, Ph.D.

Reuben Lab October 2024 – August 2025
University of Virginia, College and Graduate School of Arts and Sciences, Department of Psychology

- **Position:** Research Assistant
- **Supervisor:** Aaron Reuben, Ph.D.
- **Primary Projects:** Examining the lifespan neuropsychiatric implications of exposure to environmental harms utilizing mass spectrometry, wearable technology, and longitudinal data from the ongoing Dunedin New Zealand birth cohort study of psychosocial health, development, and aging.
- **Responsibilities:**
 - Codes and organizes longitudinal, self-report, and chemical exposure data for a population-representative birth cohort
 - Assists with literature reviews and journal publications
 - Conducts data analyses using R, R Studio, and SPSS
 - Coordinates with and presents findings to research partners in New Zealand
 - Meets regularly with PI to discuss research goals and future directions
 - Completes lab management tasks such as equipment and lab maintenance, data organization, creating and updating lab website, and organizing and attending lab meetings

Cope Lab

September 2023 – June 2025

University of Virginia School of Medicine, Department of Neuroscience, Center for Brain Immunology and Glia (BIG)

- **Position:** Laboratory and Research Technician
- **Supervisor:** Elise C. Cope, Ph.D.
- **Primary Projects:** Elucidating the role of adult-born neurons in the mouse hippocampus in social memory consolidation and retrieval, exploring perineuronal net plasticity in age-related cognitive function, studying astrocyte mediation of perineuronal net and neuronal plasticity in development, examining adult-born neuron recruitment into the social memory engram in the Shank3b knockout model of autism spectrum disorder, assessing the impacts of enhanced adult neurogenesis in the mouse hippocampus via Memantine on social memory in the Shank3b knockout model of autism spectrum disorder, investigating glial-regulated mechanisms of aberrant axonal outgrowth in Alzheimer's Disease across fruit fly and rodent species.
- **Responsibilities:**
 - Assisted with literature reviews and journal publications
 - Updated and maintained study procedures and protocols with high ethical standards
 - Practiced wet lab procedures including drug dosing and IP/IM injections, transcardial perfusions, tissue collection on Leica CM1950 and CM3050 S cryostats, and immunohistochemical techniques
 - Developed and executed novel research designs in behavioral memory assessment in mice
 - Ran and scored behavioral testing batteries to assess mouse sociability, social memory, spatial memory, object memory, and other hippocampal-dependent cognitive tasks
 - Conducted data analyses using Microsoft Excel, ImageJ/FIJI, R, EthoVision, Imaris, and Prism softwares
 - Collected and analyzed images on Leica SP8 confocal microscope, Leica Stellaris 5 confocal microscope, Olympus FV1200 laser scanning confocal, and Keyence BZ-X800 fluorescence microscope
 - Maintained a high degree of proficiency in literature on hippocampal social memory in mice
 - Managed housing, breeding, weaning, and genotyping needs for a growing colony of 500+ mice
 - Trained and mentored undergraduate and rotating graduate students in research methods and design
 - Completed lab management duties, such as assignment and management of chores, lab meetings, maintenance of lab equipment, inspections and other compliance protocols

Computational, Speech, Sensory, Development and Diseases Lab September 2022 – May 2023

James Madison University, Department of Communication Sciences & Disorders

- **Position:** Student Research Assistant
- **Supervisor:** Lincoln Gray, Ph.D.
- **Primary Project:** Measuring “distractibility” in auditory focus across experimental (Autism Spectrum Disorder, Attention Deficit and Hyperactivity Disorder, Auditory Processing Disorder) and control subjects

- **Responsibilities:**

- Assisted in the administration of testing batteries to assess distractibility and focus in neurodiverse subjects
- Contributed to a project examining the effects of a novel auditory intervention on attention
- Gained familiarity with lab equipment and procedures, including auditory assessments, attentional assessments, and an anechoic chamber

Biopsychology

August 2022 – December 2022

James Madison University, Department of Psychology

- **Position:** Teaching Assistant
- **Supervisor:** Melanie Shoup-Knox, Ph.D.
- **Responsibilities:**
 - Assisted professor in writing and organizing course materials and grading student coursework
 - Provided assistance and explanation to students during daily class discussions
 - Held weekly one-on-one tutoring sessions and led monthly exam reviews, attended weekly TA meetings
 - Researched, wrote, and presented an original lecture on a topic of interest to the class

Research Apprenticeship Program

January 2020 – May 2020

Christopher Newport University, Department of English

- **Position:** Research Apprentice
- **Supervisor:** Kyle Garton-Gundling, Ph.D.
- **Primary Project:** Examining the intersections of religion and science fiction
- **Responsibilities:**
 - Worked independently under primary researcher's guidance, met weekly to review findings
 - Devoted 10+ hours per week to navigate library and research databases and examine primary sources
 - Compiled a literature review, "Implicit Religion and the Debate in Science Fiction – A Literature Review of Religion in Science Fiction," which was utilized to develop a senior seminar course, ENGL 490: Faith in Outer Space
 - Acknowledgement on recent journal publication: Garton-Gundling, K. (2024). "Vastness and Profundity": Sublimity and Religion in Post-1960 Science Fiction. *Religion and the Arts*, 28(1-2), 196-219.

Velkey Lab

November 2019 – May 2020

Christopher Newport University, Department of Neuroscience

- **Position:** Student Research Assistant
- **Supervisor:** Andrew Velkey, Ph.D.
- **Primary Project:** Examining impacts of delay of gratification on choice behavior in betta fish
- **Responsibilities:**
 - Followed laboratory protocols and documentation procedures, including scoring animal behavior trials

- Ran trials with zebrafish and betta fish under guidance from senior bench leads
- Participated in weekly lab meetings, literature readings and discussions
- Assisted in regular maintenance of animal colonies and lab equipment

CONFERENCE PRESENTATIONS

Raghavan, T. *, Gujar, S. *, **Kilmer, J.**, Tsering, W., Bujnowska, M., Li, S., Shah, M., Suchocki, O., Kish, K., Golden, E., Moy, S., Brown, R., Prokop, S., Wang, Y., and Gaultier, A. (2025, June) Oligodendrocyte genomic stress drives Alzheimer's Disease progression. Alzheimer's Disease Gordon Research Conference (ADGRC). Ventura, CA, USA.

Moats, J. M., **Kilmer, J. M.**, Sponaugle, K., and Cope, E. C. (2024, November) Alterations in Perineuronal Nets in the CA2 Region are Associated with Age-Related Social Memory Dysfunction. University of Virginia Neuroscience Graduate Program Annual Retreat. Charlottesville, VA, USA.

Kilmer, J. M., Tatera, W. J., Moats, J. M., Meeks, I. G., and Cope, E. C. (2024, September) Exploring adult hippocampal neurogenesis and social memory in the Shank3b knockout mouse model of autism spectrum disorder. University of Virginia Neuroscience Department Annual Retreat. Charlottesville, VA, USA.

Moats, J. M., **Kilmer, J. M.**, Sponaugle, K., and Cope, E. C. (2024, August) Alterations in Perineuronal Nets in the CA2 Region are Associated with Age-Related Social Memory Dysfunction. Southeastern NIH Biotechnology Training Grant Career Development Workshop at Duke University. Durham, NC, USA.

Moats, J. M., **Kilmer, J. M.**, Sponaugle, K., and Cope, E. C. (2024, May) Alterations in Perineuronal Nets in the CA2 Region are Associated with Age-Related Social Memory Dysfunction. University of Virginia 2024 Brain Symposium. Charlottesville, VA, USA.

Moats, J. M., **Kilmer, J. M.**, Sponaugle, K., and Cope, E. C. (2024, April) Perineuronal net plasticity in age-related cognitive function. Central Virginia Chapter of the Society for Neuroscience, Blacksburg, VA, USA.

AWARDS & HONORS

Virginia Tech College of Science Dean's Assistantship Award	2025 – 2027
Phi Beta Kappa Honor Society	2023
Psi Chi International Honor Society of Psychology	2023
Phi Sigma Pi National Honor Fraternity	2021 – 2023
James Madison University Peace Corps Prep Program	2021 – 2023
President's List	2021 – 2023
Dean's List	2019 – 2021
Christopher Newport University Research Apprenticeship Program Grant	2020

CLINICAL EXPERIENCE

Gateway Homes Inc., Crozet, VA

July 2024 – February 2025

Position: Recovery Support Specialist at Crozet location**Supervisor:** Melinda Ward**Responsibilities:**

- Supported 4-8 adult clients with mental health diagnoses who recently experienced homelessness, incarceration, and/or hospitalization in maintaining stabilization of mental health symptoms and developing independent living skills in a transitional residential environment
- Planned and executed psychoeducational and skill-building groups for clients in the home
- Created and updated client treatment plans and communicated with residential care team
- Managed and distributed complex medication regimens, and provided regular education on medication management and compliance
- Documented clients' daily activity, symptomology, and progress toward treatment goals

Northwestern Community Services Board, New Market, VA

July 2023 – December 2023

Position: Psychiatric Rehabilitation Advocate at Sunshine House Psychosocial Rehabilitation Program**Supervisor:** Megan Click, LCSW**Responsibilities:**

- Managed caseload of 10-15 adult clients with serious mental illness, intellectual disabilities, and developmental disabilities through supportive counseling, development of individual treatment plans, connection to services, communication with treatment teams, and general case management as needed
- Planned and led daily psychosocial education groups, vocational skills training, and weekly community integration activities for PSR program of 20-40 members
- Met individually with clients to explore and document clients' individual goals, progress, and needs
- Maintained a calm and supportive therapeutic milieu

Northwestern Community Services Board, New Market, VA

March 2022 – September 2023

Position: Mental Health Residential Advocate and Activities Manager at Chapin House**Supervisor:** Megan Click, LCSW**Responsibilities:**

- Supported 4-8 adult clients with serious mental illness through counseling and development of independent living skills in a residential environment
- Planned and executed community integration activities and skill-building groups for clients
- Managed and distributed complex medication regimens
- Communicated needs and updates with clients' treatment teams, coordinated healthcare and service access for clients

CLINICAL CERTIFICATIONS

Qualified Mental Health Professional – Trainee	May 2023 – Present
Medication Aide Certified	March 2021 – Present
CPR and First Aid Certified	March 2021 – Present

PROFESSIONAL DEVELOPMENT

Adult Attachment Interview Institute	July 2025 – August 2025
Women in Neuropsychology (WIN) Linking with Liaisons	September 2024 – February 2025
Harvard University Prospective Ph.D. & RA Event in Psychology (PPREP)	October 2024
Rutgers University Diversifying Psychology Day	October 2024

VOLUNTEER EXPERIENCE

NextGen Psych Scholars Program Mentor	June 2025 – Present
Big Brothers Big Sisters of Harrisonburg-Rockingham County	August 2022 – Present
JMU Brain Bee Volunteer Coordinator	January 2023 – Present
Humane Society of Shenandoah County	March 2023 – November 2024
Campaign for Our Shared Future	June 2023 – November 2023
JMU Peace Corps Prep Program Alumna	September 2021 – May 2023
Phi Sigma Pi National Honor Fraternity Philanthropy Chair	January 2022 – May 2022
Gus Bus Community Literacy Program	April 2022 – May 2022
Register JMU Vice President	September 2021 – May 2022
Neurodiversity Celebration Collaborative	August 2020 – May 2021

SKILLS & INTERESTS

- Data analysis experience in R, SPSS, Microsoft Excel, ImageJ/FIJI, EthoVision, Imaris, and Prism
- Behavioral testing in rodents
- Conducting literature reviews
- Presenting journal clubs
- Abstract writing and submission, poster presentation, public speaking
- Auditory and attentional assessment in clinical populations with attentional pathologies
- Leadership and mentorship roles
- Teaching experience
- 300+ hours of volunteer experience with children and adolescents
- 2000+ hours of direct clinical experience with serious mental illness population
- Interests in clinical psychopathology, intervention development, risk and protective factors, social memory, social cognition, facial perception, and neuropsychological assessment