

BRADY M. CHISHOLM

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Research Interests

My research interests focus on understanding how the brain perceives and interacts with the world. During my time in Dr. Andrew Oxenham's lab, I engaged in auditory perception research, which introduced me to computational neuroscience. My goal is to pursue a Ph.D. that leverages AI, machine learning, and computational methods to model biological systems in humans and animals. I aim to contribute to research that deciphers how neural activity translates into behavior and decision-making.

Education

University of Minnesota, Minneapolis, MN *Sep 2023–Aug 2025*
Bachelor of Science: Psychology

- **Relevant coursework:** Regression and Correlated Data, Calculus I, Biopsychology

Gustavus Adolphus College, St. Peter, MN *Sep 2022–May 2023*

- Participated in two semesters of research apprenticeship

- Awarded two semesters of research grant funding

- Men's Varsity Swim & Dive Competitor

- **Relevant coursework:** Attention (Special Seminar), Latin I & II, Statistics 101 CLASS-NAME

Experience

Researcher, UMN Neuroscience Department *September 2025–Present*

Research Assistant, UMN Neuroscience Department *Jan 2025–Aug 2025*

Dr. Jean-Paul Noel's Cognitive and Systems Neuroscience Laboratory

- Decoding neural activity and decision-making in mice

Research Assistant, UMN Psychology Department *Dec 2023–Aug 2025*

Dr. Andrew Oxenham's Auditory Perception and Cognition Laboratory

- Data collection: EEG, audiograms

- Statistical analysis: GAM, GCA, ICA, linear regression, ANOVA

- Various independent projects

Research Assistant, UMN Ecology, Evolution, and Behavior *Jun 2024–Aug 2024*

Dr. Mark Bee's Animal Communication Laboratory

- Seasonal assistant supporting research in *Hyla chrysoscelis* and *Hyla versicolor* tree frogs

- Animal handling, experiment protocols, exploratory statistical analysis

- Assisted in craniotomies and brain sample extraction

Grants and Awards

Career Grant Monies Awarded: \$5,000

Undergraduate Research Opportunities Project Grant *May 2024*

- \$2,100 research grant supporting *Analysis of Pupillometry Data* with Juraj Mesik

Dean's First-Year Research and Academics Scholarship *Jan 2024*

- \$900 scholarship for research with Dr. Oxenham

- Assisted in EEG and pupillometry data analysis

Presidential Research Grant, Gustavus Adolphus College *May 2023*

- \$1,500 summer research grant (*declined*)

Publications and Presentations

Publications

BRADY M. CHISHOLM—CURRICULUM VITAE

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1. Brady M. Chisholm, Juraj Mesik. *An Analysis of Pupillometry Data in a Speech Paradigm*. N. 2024.

Projects

A GAM Analysis of Pupillometry Data

2024

- Fatigue effects in pupillometry data modeled using GAM

The CodeR Sessions

2024–Present

- Increasing accessibility for R and data science education
- Project website: brady-c.cc

Research Skills and Technologies

Research Skills: EEG data collection, CAD, animal handling, audiograms, chemical handling

Technology: MATLAB, Python, R, HTML, Git, GitHub