LANE LEWIS

UNDERGRADUATE IN MATH AND NEUROSCIENCE

CONTACT DETAILS

406-830-4470
lanerobertlewis@email.arizona.edu
2610 E Ninth St. Tuscon,
AZ 85716

RESEARCH INTERESTS

Computational Neuroscience

Computational Psychology

Machine Learning and AI

PROGRAMMING SKILLS

Proficiency in:
Python, Javascript/HTML, R

Experience With:
AWS, Github, Docker, SQL, NoSQL,
Nodejs, React, Svelte, Electron

AWARDS

2018, 2019 Putnam Competition Award

David Lomen Excellence in Mathematics
award

James R. Bunch Scholarship

Lusk Scholarship

CLASSES SAMPLE

Real Analysis (A,B)

Theory of Statistics

Theory of Probability

Neurophysiology

PERSONAL INTERESTS

Rock Climbing, Jazz Piano, Cooking

ACADEMIC CAREER

UNIVERSITY OF ARIZONA (FALL 2018 -)

Double majoring in Comprehensive Mathematics and Neuroscience/
Cognitive Sciences with a minor in Information Science. Honors College,
GPA: 3.93. Expected graduation date: Spring of 2022.

STEVENSVILLE PUBLIC HIGH SCHOOL (2013-2017)

GPA: 3.72. Class rank 3/72. SAT 1450.

RESEARCH EXPERIENCE

COMPUTATIONAL NEUROSCIENCE RESEARCH

Under mentor Professor Zhang-Molina, Independent Project (Fall 2019 -)

- Researched post-inhibitory rebound-like effects in coupled integrate-and-fire neurons
- Analyzed highly nonlinear coupled differential equations and recursive maps
- Presented poster at JMM in January 2021
- First author paper in preperation

COMPUTATIONAL NEUROSCIENCE RESEARCH

Through The NRD Lab, Independent Project (Spring 2020 -Spring 2021), Summer 2020

- Researched how to implement a multidimensional Kalman filter into a biologically
  plausible attractor neural network
- Independently investigated and applied modern theories of neural population dynamics
- Presented poster at UBRP conference in January 2021

PSYCHOLOGY OF TEACHING RESEARCH

Through The NRD Lab, in collaboration with the education dept. (Spring 2020 -)

- Helped plan a novel experiment to test explore-exploit behaviors in elementary school
  teachers
- Programmed and deployed several online experiments

PROJECTS

ONLINE EXPERIMENT PLATFORM

Project Lead and Developer (Fall 2020 -)

- Developed an online experiment platform (PsychoSite) for psychology labs to run
  human subjects on in a cost effective, secure way amidst the Covid-19 pandemic

TEACHING EXPERIENCE

TEACHING ASSISTANT FOR CALCULUS 2 & 3

Assisted Dr. Neville (Fall 2019), and Professor Sandler (Spring 2020)

- Led review sessions and several lectures for Calculus 3
- Held mixed office hours in Calculus 2, 3, and Statistics