

Angel Ausmus

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Education

Bachelor of Science in Biology

Graduated May 2025

Bachelor of Arts in Philosophy

Minor: Cognitive and Behavioral Neuroscience

University of Colorado Denver (Summa Cum Laude, GPA: 3.95/4.00)

Research Experience

Research Intern, JRaviLab,

March 2025–Present

Department of Biomedical Informatics,

University of Colorado School of Medicine

- Developed a supervised machine learning model predicting host specificity of Influenza A virus using a k-mer matrix filtered from BV-BRC in a classification model
- Trained and evaluated random forest models in R using Influenza A genomic feature data, providing insight into viral adaptation and zoonosis prediction
- Presented research findings at the Spring 2025 ISCORE Session

Research Intern, Jagannathan Laboratory,

May 2024–June 2025

Department of Biochemistry and Molecular Genetics,

University of Colorado School of Medicine

- Collaborated on projects investigating mechanisms of translational plasticity
- Maintained cell cultures, designed and executed experiments, and performed western blotting, immunofluorescence, RNA isolation, protein purification, and qPCR
- Presented research findings in Fall 2024 as a part of the RNA Bioscience Initiative

Research Assistant, Welle BIOElectrics Laboratory,

August 2024–May 2025

Department of Neurosurgery,

University of Colorado School of Medicine

- Collaborated on projects determining the neural dynamics and consequences of myelin loss and mapping neural activity in response to vagus nerve stimulation in mouse models
- Performed data curation and variable extraction with deep learning algorithms
- Assisted in rodent neurosurgery and rodent skilled motor learning tests
- Analyzed c-Fos brain mapping data in R to determine neuroanatomical regions associated with vagus nerve stimulation
- Presented research findings at the Spring 2025 Research and Creative Activities Symposium

Research Mentee, Vergara Laboratory,

March 2024–June 2024

Department of Ophthalmology,

University of Colorado School of Medicine

- Tested hiPSC-derived retinal organoid models of photoreceptor death amenable to drug screening
- Assisted in neuronal cell culture maintenance
- Fixed, prepared, stained, and imaged retinal organoids using indirect immunofluorescence and confocal microscopy
- Presented research findings at the Spring 2024 ISCORE Session

Clinical Experience

Emergency Department Patient Access Specialist, June 2022–July 2023
UCHealth, Colorado Springs, CO

- Updated patient records with clinical, demographic, and billing information in EPIC software
- Provided administrative support to clinical staff by organizing tasks during high-volume periods
- Scheduled appointments, reviewed work queues, directed calls, and handled patient concerns

Medical Office Manager, Peakview Sport and Spine, May 2021–January 2022
Monument, CO

- Developed rapport with patient population and collaborated with clinical staff to promote positive patient outcomes
- Prepared office budgets and payroll, monitored expenses, and managed inventory
- Trained, hired, and supervised clinical and administrative staff

Professional Certificates

EMT-B Certification, August 2021–Present
National Registry of Emergency Medical Technicians

EMT-IV Certification, December 2021–Present
UCHealth Memorial Hospital North

Skills

- **Molecular and Cellular Biology:** RNAseq, CRISPR/Cas9 gene editing, ATAC-Seq, cell culture maintenance, high-throughput sequencing library preparation, PCR, RT-PCR, Western blot, immunofluorescence, gel electrophoresis, bacterial transformation, buffer preparation
- **Python:** NumPy, scikit-learn, Matplotlib
- **R:** Seurat, dplyr, tidyr, ggplot2
- **MATLAB:** NEURON, Simulink
- **Software:** GitHub, Bioconductor, DeepLabCut, EPIC, Microsoft Office Suite

Community Service

Volunteer, Denver Botanic Gardens, June 2025–Present

Volunteer, MaxFund Animal Adoption Center, October 2024–Present

Front Desk Volunteer, Center on Colfax, January 2024–May 2024

ICU Administrative Volunteer, HCA HealthONE Sky Ridge, January 2022–May 2022

Volunteer, Hospice, July 2019–February 2020