

# SYDNEY COUGHLAN

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## PROFESSIONAL SUMMARY

Statistics major with a minor in Applied Data Science. Strong interest in clinical research, information technology, healthcare analytics, data-driven decision making, and improving access and outcomes through data-informed strategies. Experience presenting technical concepts to diverse audiences through tutoring, research coursework, and leadership roles.

## TECHNICAL SKILLS

**Research & Clinical:** Familiar with Clinical Research Methods, GCP, IRB Processes; Trained in HIPAA Compliance, Data Collection, and Data Validation.

**Programming & Analysis:** R, Python, SQL, Statistical Modeling, Regression, and Bayesian Methods.

**Data Management & Visualization:** Tableau, PowerBI, Excel, and Google Sheets.

**Communication & Tools:** Technical Writing, PowerPoint, Google Slides, and Cross-functional Collaboration.

## EDUCATION

**Bachelor of Science, Major: Statistics, Minor: Applied Data Science**

*Anticipated May 2026*

Colorado State University Fort Collins, CO

## RESEARCH & DATA PROJECTS

**Healthcare Access Prediction Study (Capstone)**

**Jan 2026 - Present**

- Analyzed national health data to model whether individuals seek medical care based on symptoms, healthcare access, and insurance status. Evaluated predictors of utilization and disparities across insurance types and demographics.

**Monte Carlo Extended Simulation for Pacemaker Model**

**Oct 2025-Dec 2025**

- Extended an existing biomedical model of pacemaker electrical impedance using Monte Carlo simulation methods.
- Explored how stochastic modeling can improve understanding of uncertainty in biomedical device performance.

**Socioeconomic Determinants of COVID-19 Outcomes**

**March 2024 – May 2024**

- Analyzed county-level socioeconomic data to evaluate relationships with COVID-19 mortality rates and case prevalence.
- Applied statistical analysis and visualization to identify socioeconomic factors associated with public health outcomes.

## EXPERIENCE

**Lab Supervisor and IT Support, CSU College of Liberal Arts**

**Oct 2022 – Present**

- Diagnosed and resolved technical issues across multiple computer labs, ensuring minimal downtime for academic users.
- Maintained software environments to support coursework and research needs.

**Statistics Tutor, CSU College of Natural Sciences**

**Jan 2024 – Present**

- Communicate complex statistical concepts including probability, regression, and inference to 10+ students weekly, tailoring explanations into clear, understandable reasoning.
- Improved student understanding of statistical reasoning and problem-solving through structured walkthroughs and practice-based learning.

**Student Coordinator, CSU Orientation and Transition Programs (OTP)**

**Jan 2024 – Aug 2025**

- Coordinated logistics and planning for large-scale orientation events
- Managed communication and scheduling for 30+ Orientation Leaders, cross-team coordination and program execution.

**Resident Care Assistant, Ebenezer Arbors at Ridges Assisted Living**

**Jan 2021 – Mar 2022**

- Maintained accurate and confidential care documentation and reports (HIPAA Compliant).
- Collaborated with nursing staff and caregivers to deliver consistent, person-centered care to over 150+ residents.

## EXTRACURRICULAR ACTIVITIES

**Volunteer, UHealth Food Pantry**

**Oct 2025 – Present**

- Led Food drives and outreach to encourage donations and recruit volunteers.

**President, Rams in Motion Dance Club at CSU**

**Aug 2023 – Present**

- Led 120+ students, planned 15+ weekly club meetings, 3+ bonding meetings, and the annual showcase.