# SYDNEY E. SHEARER

(724) 599-4493          seshearer.2000@gmail.com

## EDUCATION

**Juniata College**, Huntingdon, PA                                    Anticipated Graduation Date: May 2022
Bachelor of Science, Data Science & Mathematics, GPA 3.96/4.0
Dean's List, all semesters
Student Member, Mathematical Association of America

## RELEVANT COURSEWORK

| | |
|---|---|
| Introduction to Data Science | Introduction to Probability & Statistics |
| Statistical Consulting | Multivariate Statistics (expected) |
| Calculus I/II/III | Linear Algebra |
| Discrete Structures | Foundations of Mathematics |
| Combinatorics | Real Analysis |
| Data Acquisition | Machine Learning |
| Information Visualization | Big Data Techniques (Master's Level) |
| Database Management Systems | Computer Organization |
| Unix Programming | C++ Programming |
| Android Programming | Information Technology Systems |

## COMPUTER SKILLS

Programming languages including Python, Java, Unix, C++
Statistical software and language R/RStudio
Database software SQL
Visualization software Tableau

## RESEARCH EXPERIENCE

**Data Science Across Disciplines Research Experience for Undergraduates**          May 2021 – August 2021
Marquette University (through National Science Foundation), Milwaukee, WI                              (virtual)
- Collaborated one-on-one with Dr. Sabirat Rubya to research "Preventing Perinatal Mental Health Problems" in hopes of creating a technological approach to assisting with perinatal mental health care (https://reu.cs.mu.edu/index.php/User:SShearer)
- Conducted a systematic literature review of approximately 90 papers and drafted literature review paper to be published
- Presented to a group of REU fellows about findings from the systematic literature review

**Institutional Research**                                                                January 2021 – present
Juniata College Office of Institutional Effectiveness, Huntingdon, PA
- Created random forest models to predict student retention rates and common factors associated with retention to assist College in decision-making that will effectively boost rates
  - Results of random forest analysis are currently being utilized by various offices at the College to assist in identifying at-risk students
- Presented final report on student retention rates to Juniata's Board of Trustees
- Collected data from an internal database system to provide reports for Juniata faculty and staff about various student and course related data
- Created and updated various public Tableau visualizations to display College-related data (https://public.tableau.com/app/profile/juniata.college)
- Met weekly with Office of Institutional Effectiveness members to prioritize goals

**TRIPODS+X:EDU Research Experience for Undergraduates**                          May 2020 – July 2020
Valparaiso University (through National Science Foundation), Valparaiso, IN
- Researched "Investigations of Student Difficulties in Data Science Instruction" with five student researchers and Drs. Ruth Wertz, Katherine Kinnaird, Karl Schmitt, and Bjorn Sandstede (https://scholar.valpo.edu/sires/69/)
- Created a methodology to categorize qualitative survey responses from introductory data science courses in a quantitative manner
- Collaborated on writing an internal white paper and presenting methodological findings internally

**Introductory Research Student**                                     January 2019 – May 2019
Juniata College Department of Mathematics, Huntingdon, PA
- Studied various patterns in a differing counting system with a group of two student researchers and a faculty mentor to learn how to appropriately conduct mathematical researcher
- Wrote a collaborative internal research paper with two other student researchers to demonstrate findings

## LEADERSHIP EXPERIENCE

**Community Advisor**                                                      August 2021 – present
Juniata College Office of Campus Life, Huntingdon, PA
- Supervised a staff of four residential assistants to provide them guidance in their roles and work on professional development, including communication, team building, and time management
- Performed administrative tasks for my staff, including overseeing a budget, submitting paperwork, and assisting with resident check-ins
- Provided duty coverage for campus on a rotating basis with other Community Advisors to enforce College policy and ensure the safety and security of all residential students
- Mediated conflicts between residents using active and passive communication strategies to find solutions best suited for all parties involved
- Articulated to student staff and residents the philosophy and policies of the College and Office of Campus Life including establishing a community that is tolerant, respectful, and inclusive

**Data Science Help Desk Associate**                                January 2020 – August 2021
Juniata College Department of Data Science, Huntingdon, PA
- Assisted students with homework issues in master's level data science courses including Data Acquisition & Visualization, Linear Algebra, Discrete Structures, and Python Programming
- Proctored examinations for students through Zoom

**Resident Assistant**                                                   August 2019 – May 2021
Juniata College Office of Campus Life, Huntingdon, PA
- Managed a floor of approximately 40 undergraduate students per year and provided residents with appropriate campus resources
- Mediated conflicts between residents using active and passive communication strategies to find solutions best suited for all parties involved
- Conducted bi-weekly events to promote personal and professional development of residents
- Provided duty coverage for a building on a rotating basis with other Resident Assistants to enforce College policy and ensure the safety and security of residential students

**Peer Tutor**                                                           March 2019 – May 2021
Juniata College Office of Learning Services, Huntingdon, PA
- Aided students in reviewing materials for various mathematics and computer science courses
- Provided necessary resources to assist students in developing study skills and homework techniques

## EXTRACURRICULAR ACTIVITIES

**Co-Choreographer**                                                     August 2020 – present
Juniata College Kickline Dance Team, Huntingdon, PA
- Choreographed four dances per semester for a team of 10 dancers to perform at various sports events
- Choreographed five dances for a group of 18 dancers to perform at charity pageant event
- Coordinated charity pageant event, including preparing participants, organizing locations, and handling finances

**Classroom Grader**                                                    January 2020 – April 2020
Juniata College Department of Computer Science, Huntingdon, PA
- Graded Computer Science II homework assignments in a team of three for a class of approximately 30 students

**President, Vice President, Executive Chair**                          August 2019 – present
Juniata College Dance Ensemble, Huntingdon, PA
- Organized one recital per semester, including coordinating choreographers, booking spaces, and handling finances

**Treasurer**                                                                                 August 2019 – May 2021
Juniata College Null Set Math Club, Huntingdon, PA
- Managed a yearly budget for club-related activities
- Assisted club president with event planning

**Campus Tour Guide**                                                              August 2019 – May 2020
Juniata College Admissions Office, Huntingdon, PA
- Provided prospective students and their families with personalized tour of the College's campus
- Attended monthly preparation meetings to gain more knowledge of the College

**Eagle Ambassador Student Recruiter**                                  August 2018 – May 2019
Juniata College Admissions Office, Huntingdon, PA
- Volunteered to attend luncheons with prospective students to provide them with information with the College and related activities