

Camaryn Petersen
25 Olive Street, Chagrin Falls, OH
978-846-4674
clp100@case.edu

EDUCATION

- 2023-2024 Case Western Reserve University School of Medicine
- Master of Science in Biomedical and Health Informatics
- 2019-2023 Case Western Reserve University (CWRU)
- Bachelor of Science in Systems (Computational) Biology
 - Focus on Bioinformatics & Genetics; Minor in Chemistry

RESEARCH EXPERIENCE

- Summer 2024 CWRU School of Medicine, Department of Population and Quantitative Health Sciences
PI: Nicholas Schiltz, PhD
Project: “Accelerating the Pace of Implementation of Age-Friendly Health Systems in Retail Clinics”
- Analyzed several years of urgent care data using R programming; employed generalized linear models to identify key intervention strategies; presented and delivered findings to lead researchers for use in national healthcare conferences and future manuscript publications.
 - Developed SAS/SQL programs to analyze Medicare claims data for health care efficiency measures (HEDIS measures).
 - Contributed to the successful implementation of Age-Friendly Health Systems (AFHS) in over 1,000 CVS MinuteClinics across the U.S.
- 2022-2023 Case Western Reserve University, Department of Biology
PI: Angela Cicca, PhD
Project: “School Transition After Traumatic Brain Injury”
- Conducted comprehensive data scoring and analysis for researchers investigating the academic, social, and health outcomes of children with traumatic brain injuries.
 - Leveraged MATLAB skills to analyze the data collected by researchers, enhancing the scoring process through a custom-developed program
 - Created visual representations of significant research findings; designed accessible infographics to spread awareness about important discoveries from the studies.

PROJECT HIGHLIGHTS

- 2024 Ontology-Based Featured Engineering in Machine Learning for Epilepsy Patient Records
- Developed Python program to combine the Epilepsy and Seizure Ontology with feature engineering, natural language processing, and machine learning techniques; designed a model that can accurately predict a patient's diagnosis based on their neuropathology data.
- 2024 Using Maternal Data to Predict Healthy Births
- Employed R statistical analysis to predict average birth weights by county based on maternal characteristics; developed linear and logistic regression models using neonatal data published by the CDC.
- 2024 Premature Birth Rate Trends in Ohio and the Impact of the COVID-19 Pandemic
- Illustrated trends and discrepancies in premature birth rate trends in Ohio over 10 years and drew comparisons to trends in COVID-19 cases using ArcGIS mapping tools.
- 2023 The Use of AI for Neonatal Pain Detection
- Investigated and presented the current methodologies and limitations of the use of artificial intelligence in neonatal intensive care units to detect pain in newborn patients.

WORK EXPERIENCE

- 2023 CWRU School of Medicine Financial Department, Cleveland, OH
- Researched, developed, and integrated an extensive SOP for quantifying faculty productivity using the concept of RVUs.
 - Reported data analysis findings to the financial department and the Dean of the School of Medicine.
 - Evaluated compensation deciles for thousands of faculty members across several departments and specialties.
 - Utilized Microsoft Excel to analyze and report faculty compensation statistics for the 2023 fiscal year.
- Summer 2022 MP Biomedicals, Solon, OH
- Executed data integration to the new ERP system, updated data storage, and spearheaded administrative tasks. Utilized Excel and Microsoft Office for collaboration on large data sets.
 - Managed thousands of data entries to ease the transition between software programs. Provided efficient data analysis techniques.
 - Completed quality inspection procedures for biochemical products, including FTIR spectroscopy, RNase/DNase analysis, UV-Vis spectroscopy, melting point, optical rotation, loss on drying, density determination, and pH measurement.

TECHNICAL SKILLS

- 2023-2024 Analytical Skills
- Advanced Statistical Modeling, Database Management and Optimization, Feature Engineering & Machine Learning, Geospatial Analysis, Cost-Effectiveness, Risk Analysis
- 2023-2024 Specialized Software Systems
- Protege Ontology Editor, ArcGIS, Arena Simulation, TreeAge Pro
- 2022-2024 Programming Languages
- R, Python, Java, MATLAB, SAS, SQL
- 2022-2024 Programming Interfaces
- R Studio, Jupyter Notebook, Visual Studio Code, DrJava, Mathematica, Tableau
- 2022-2024 Collaboration Tools
- Microsoft Office, Google Workspace, Box, Slack, Zoom, GitHub

HONORS AND AWARDS

- 2019-2023 Case Western Reserve University Dean's High Honors Award
- 2019-2023 CWRU University Scholar Recipient

COMMUNITY SERVICE

- 2021 University Hospital COVID Clinic, Cleveland, OH
- Ensured the COVID-19 vaccine registration was accessible to those with technological challenges, collected and registered patient data, and assisted in the successful distribution of vaccines to the greater Cleveland community.
- 2021 University Hospital's Rainbow Connects Program
- Addressed social needs of underserved patients and families, distributed resources and donations, and provided overall support for the program.
- 2019-2020 Rainbow Babies and Children's Hospital
- Improved hospital stays for patients and their families in the pediatric hematology/oncology unit by offering resources, activities, and support.

MEMBERSHIPS

American Statistical Association
Biomedical Graduate Student Organization (CWRU School of Medicine)
Alpha Gamma Delta International Fraternity – VP of Recruitment