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EDUCATION

2023-2024 — Case Western Reserve University School of Medicine
- Master of Science in Biomedical and Health Informatics (candidate)

2019-2023 — Case Western Reserve University (CWRU)
Bachelor of Science
- Major 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 Associaton
Biomedical Graduate Student Organization (CWRU School of Medicine)
Alpha Gamma Delta International Fraternity – VP of Recruitment