

Sean Grimm

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EDUCATION

George Mason University: Fairfax, Virginia
M.S. Health Informatics, Data Analytics

May 2024
GPA 3.8/4.0

George Mason University: Fairfax, Virginia
B.S. Kinesiology

Dec 2021
GPA 3.5/4.0

TECHNICAL SKILLS

Python (matplotlib, pandas, scikit-learn, pytorch), SQL, R, XML, STATA, WEKA, MS Office, html, CSS

RELEVANT COURSEWORK & PROJECTS

Datamining in Healthcare

Aug-Present

- Presented a comprehensive review on a journal article, "Predicting Total Knee Arthroplasty from Ultrasonography Using Machine Learning". The video presentation is available on my website under the projects section.
- Tasked with a group research project that examines heart stroke rate against demographic and health measurements. The project will consist of data collection, preprocessing, feature selection, model selection, performance testing, conclusive analysis, and presentation.

Artificial Intelligence in Health

Aug-Present

- Created a random forest predictive model in python trained on 500 bruise images. The model correctly classifies bruise image light source type from 11 different categories, with an AUC score of 0.89.
- Tasked with a deep learning project that utilizes pretrained convolutional neural network models, transfer learning, and hyperparameter tuning. My project will build upon the YOLOv2 model, designed for determining KL grade (OA severity using x-ray) in knee joints, by inputting preprocessed knee x-ray photos the model has not yet seen as a PoC.

Comparative Effectiveness

Jan-May 2023

- Generated a large dataset via the All of Us Database, a research program run by the NIH, for research analysis.
- Created a causal network model, using python and Netica, on diabetes and its predictor variables with ordinary & LASSO regressions. The video presentation is available on my website under the projects section.

Healthcare Databases

Aug-Dec 2022

- Created a video SQL tutorial presentation on the "JOIN" function. The video presentation is available on my website under the projects section.
- Merged, analyzed, and queried health data using SQL.
- Developed skills in database management and data manipulation.

Advanced Statistics in Health Research

Aug-Dec 2022

- Researched the association between chronic health conditions (CHC) and demographic characteristics on fall frequency. Concluded that Age, Gender, Alzheimer's & dementia, and heart problems increase likelihood of falling; stroke, COPD, and Medicaid assistance have no association.
- Conducted and interpreted statistical analyses of health-related data sets using STATA.

EXPERIENCE

Physical Therapy Assistant, Ascend Physical Therapy, Vienna, Virginia

Dec 2021-Present

- Facilitate the delivery of quality care in a timely manner.
- Diligently help to progress patients' exercises as needed.
- Collaborate closely with the physical therapists to ensure that the care plan was effective and efficient.
- Provide regular updates on patient progress and report any issues or concerns to the physical therapist for further action.