Susanna Morin, MSc

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PROFESSIONAL SUMMARY

I'm a Data Scientist with 2+ years of experience turning complex data into clear insights and actionable strategies with the goal of patient care optimization. I hold a strong foundation in predictive and descriptive analytics, as well as statistical modeling applied to Electronic Health Records and Claims Data. My main tech stack relies heavily on using Python, R, and SQL to ingest, process, analyze, and visualize my data. I've successfully led projects for government-funded population healthcare programs that have informed policy and resulted in additional funding at a state and federal level.

SKILLS

PROGRAMMING/LANGUAGES C++, Python, R, SQL, Microsoft Suite
DATA ANALYSIS TOOLS Pandas, NumPy, Matplotlib, Seaborn, Scikit-Learn, PowerBI, ggplot2
DATA STORYTELLING Data Wrangling, Statistical Analysis, Predictive Analysis, Empirical Trends, Data Visualization, Survival Analysis
MACHINE LEARNING Linear and Logistic Regression, Principal Components Analysis, Feature Extraction, Model Selection

EDUCATION

University of California
Master of Science: Biomedical Informatics 2022
Bachelor of Arts: Computer Science, Bioinformatics 2021

PROFESSIONAL EXPERIENCE

Gainwell Technologies | November 2022 – Present
Senior Healthcare Data Scientist
- Engineered a Cox proportional hazards regression model to assess survival time in SPMI patients, identifying key predictor variables that can influence healthcare policy and improve patient outcomes
- Developed and optimized comprehensive data tables for downstream population healthcare analysis, leveraging Electronic Health Records (EHRs) to enhance data accessibility and improve decision-making processes
- Performed an in-depth total cost of care analysis, leveraging time series data to reveal significant patterns in healthcare provider utilization, driving initiatives that optimized resource allocation and improved service quality
- Led a team of junior data scientists, providing expert guidance and support on complex data analysis projects, resulting in improved project outcomes and a 25% increase in team efficiency

UCSF Biomedical Informatics | July 2021 – November 2022
Clinical Data Scientist
- Engineered advanced computational models to enhance disease diagnostics, leveraging machine learning techniques to improve accuracy and efficiency in therapeutic applications, resulting in a 30% reduction in diagnostic time
- Redesigned a CNN model for knee osteoarthritis diagnosis, achieving improved predictive performance by substituting bone shape with cartilage thickness as the key biomarker in the analysis process

UC Santa Cruz Genomics Institute | July 2019 – April 2021
Bioinformatics Engineer
- Developed a genotyper using the Markov Chain Monte Carlo probabilistic model that supports standard variant calling formats; Improved accuracy and performance of genotyper using the Min-Cut algorithm to break out of sampling bottlenecks maximizing mixing efficiency; Established evaluation methods that compare accuracy metrics against gold-standard datasets

Gladstone Institute | 2018; 2020
Data Science Analyst | July 2020 – November 2020
- Investigated how single-cell RNAseq data and single-cell ATACseq data from mouse hearts correlated with each other across drug treatment and disease states to successfully predict enhancer activation due to heart stress
- Built a support vector machine (SVM) model to predict enhancer activation (single cell ATAC-seq) from expression data (single-cell RNA-seq); Presented research findings at the Cold Spring Harbor's Biological Data Science Conference 2020

Bioinformatics Analyst, Cardiovascular Disease | June 2018 – August 2018
- Researched gene expression in the interventricular septum of the heart via RNA in situ hybridization that assisted in narrowing down candidate genes ; Visualized signals in RNA molecules using fluorescent microscopes; Utilized bioinformatics clustering tools such as Seurat to analyze RNA-seq experiments that provided information on gene expression in mouse heart tissue