Merlin Dassanayake
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EDUCATION

Northeastern University, Boston, MA — January 2024 – Expected December 2025
Candidate for the Professional Master of Science in Bioinformatics — GPA: 3.95
Coursework: Introduction to Data Mining/Machine Learning, Bioinformatics Programming, Introduction to Computational Methods in Bioinformatics, Collecting, Storing, and Retrieving Data

University of California, Santa Barbara, Santa Barbara, CA — September 2017 – June 2021
Bachelor of Science, Biopsychology — GPA: 3.5
Coursework: Molecular Genetics, Principles of Biochemistry, Neuropharmacology, Linear Algebra, Vector Calculus, Research Methods, Statistics

TECHNICAL SKILLS

Programming Languages: R, Python, SQL, Bash Scripting
Machine Learning Algorithms: Naïve Bayes, Decision Trees, Linear/Multiple Regression, ANN/SVM, k-NN
Databases: DB Browser for SQLite, SQLite
Operating Systems: Linux/Unix, macOS, Windows

ACADEMIC PROJECTS

Soybean Grain Yield Prediction using Machine Learning in R, Northeastern University
Introduction to Data Mining/Machine Learning Signature Project — July 2024 - August 2024

- Applied data cleaning and PCA techniques in R on agricultural dataset handling missing values and reducing collinearity, improving RMSE and maintaining 80% variance explained
- Utilized three different machine learning models (Multiple Regression, Regression Tree, and SVM) in R to predict grain yield, improving accuracy by 47% when using k-fold cross validated homogeneous bagging model compared to SVM (RMSE of 571 vs. 297)

WORK EXPERIENCE

ScribeAmerica – **Kerlan Jobe Orthopedic Clinic**, Anaheim, CA — February 2022 – June 2023
Medical Scribe

- Supported four orthopedic surgeons by taking efficient and accurate patient notes in Epic EMR, adapting to each specialization and workflow resulting in improved clinic efficiency and reduction of physician workload
- Implemented training regimen for ten new scribes by creating customized study guides for each physician and conducting mock charting situations to assess readiness for solo work, resulting in successful training and smoother transitions between scribes

RESEARCH EXPERIENCE

Vision and Image Understanding Lab, Santa Barbara, CA — October 2019 – June 2021
Undergraduate Research Assistant

- Streamlined experiment enrollment while serving on executive team with two other research assistants by designing recruitment posters and developing standardized Google Sheets to track participant progress and compensation, improving efficiency of experiment deployment time
- Participated in initial data testing for cancer detection study using 3D breast tomography scans ensuring reliability of experimental program on MATLAB, allowing experiment to proceed in enrolling test subjects and eventual publication