

## Merlin Dassanayake

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### EDUCATION

<b>Northeastern University</b> , Boston, MA <i>Candidate for the Professional Master of Science in Bioinformatics</i>	January 2024 – Expected June 2026 GPA: 3.96
<b>Coursework:</b> Introduction to Data Mining/Machine Learning, Bioinformatics Programming, Statistics for Bioinformatics, Genomics, and Information Design and Visual Analytics	

  

<b>University of California, Santa Barbara</b> , Santa Barbara, CA <i>Bachelor of Science, Biopsychology</i>	September 2017 – June 2021 GPA: 3.5
<b>Coursework:</b> Molecular Genetics, Principles of Biochemistry, Neuropharmacology, Organic Chemistry, Linear Algebra, Vector Calculus, Research Methods, Statistics	

### TECHNICAL SKILLS

**Programming & Scripting:** R (tidyverse, DESeq2), Python (pandas, numpy, scanpy, anndata), Bash, SQL

**Bioinformatics Tools & Databases:** BLAST, UCSC Genome Browser, FASTQC, IGV, SQLite

**Data Visualization:** ggplot2 , Tableau Public, Matplotlib, Power BI

**Environment & Workflow Management:** Conda/mamba, Git/Github, Linux/Unix shell, Docker

### 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