

## Merlin Dassanayake

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### EDUCATION

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**Northeastern University**, Boston, MA January 2024 – Expected December 2025

*Candidate for the Professional Master of Science in Bioinformatics* GPA: 3.91

**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

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**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

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**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
- Developed 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

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**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

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**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