

# Allison Lynn

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## Professional Summary

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- Data scientist with strong foundation in statistical modeling and mathematics, committed to leveraging data-driven insights for impactful solutions. Over three years of programming experience, with a passion for exploring data through analytical strategies, visualization techniques, and machine/deep learning methods.

## Education

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**The University of California Los Angeles**, BS in Statistics and Data Science Sept 2022 – June 2026

- Cumulative GPA: 3.77/4.00 | Dean's Honors List: Winter 2023, Fall 2024
- **Coursework:** Data Analysis and Regression, Probability Theory, Design and Analysis of Experiments, Mathematical Statistics, Calculus of Several Variables, Linear Algebra, Programming in R, Programming in C++, Programming in Python, Statistical Models and Data Mining, Linear Models, Computational Statistics with R

## Experience

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**Data Strategy Intern**, Ryan, LLC – Los Angeles, CA June 2024 – Aug 2024

- Collaborated with technology leaders under Agile methodologies to enhance machine learning models utilizing PyTorch and TensorFlow.
- Streamlined data solutions and enhanced processing capabilities using large language models.
- Developed and optimized Python scripts for comprehensive data analysis and visualization.
- Crafted SQL queries to efficiently manage and maintain data warehouses in Databricks, contributing to the implementation of a data lake storage solution.

**Calculus Tutor**, Unlimited Tutoring – San Diego, CA April 2023 – June 2024

- Conducted tutoring sessions for high school and university calculus courses.
- Leveraged extensive mathematics knowledge and strong communication skills to provide one-on-one tutoring.

## Projects

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**Predicting ICU Length of Stay** ICU-Stay-Prediction

- Applied Natural Language Processing (NLP) to predict ICU length of stay, utilizing BioBERT embeddings and training Random Forest models to capture complex patterns while using LASSO to reduce overfitting.

**NBA Analysis: Predicting Game Outcomes and Player Salaries** NBA-Analysis

- Developed a classification model in Python to predict NBA game outcomes, achieving **93.87%** accuracy through feature engineering (rolling averages, weighted stats) and feature selection with Linear SVC.
- Trained Random Forest and Gradient Boosting models on engineered and selected features.
- Applied linear regression in R to model and predict NBA player salaries, identifying key performance metrics.

**Predicting Heart Failure with LDA** Heart-Failure

- Applied Linear Discriminant Analysis (LDA) with **83.33%** accuracy, validating model assumptions and confirming a primarily linear relationship between significant predictors and heart failure.
- Utilized LASSO regression for feature selection, simplifying the model while maintaining predictive accuracy.

## Skills

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**Data Science:** Statistical modeling (Logistic regression / LDA / QDA), Machine learning (Random Forest / Gradient Boosting / Lasso / Ridge / Linear SVC / Kernel SVM), Data Visualization, Experimental Design, Data Mining, Exploratory Data Analysis (EDA), LLM, Bias-Variance trade-off, Neural networks

**Languages:** Python (Pandas/Matplotlib/PyTorch/Sklearn), R, SQL

**Mathematics:** Calculus, Linear Algebra, Probability Theory, Optimization

**Data Engineering:** Extract Transform Load (ETL), Databricks, Azure DevOps, Excel