

# Keeven Sivanathan

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## EDUCATION

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University of San Francisco, San Francisco, CA  
Bachelor of Science, Data Science

expected graduation: **May 2020**

## NOTABLE PROJECT

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### Squat Classification with Human Pose Estimation (openCV) **September 2020 – December 2020**

- Used image classification to identify if a squat is performed correctly based off of joint angles
- Gathered and labeled of images as a good or poor performance
- Retrieved data with Human Pose Estimation for body joints & the angles between joints
- Implemented a Random Forest algorithm which has 90% accuracy
- <https://github.com/KeevenSivanathan/MLFitness-Project>

## RELEVANT COURSEWORK

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### Machine Learning, Grade Attained: A+ **September 2020 – December 2020**

- Performed Exploratory Data Analysis to extract key variables, detect outliers and anomalies, and display visualizations to better understand the structure of the data
- Applied NumPy and Pandas to read and clean data for modeling
- Employed machine learning algorithms such as regression, classification, and clustering to fit models and predict outcomes
- Predicted and classified target variables using linear regression, K-Nearest Neighbors, Random Forest, logistic regression, and K-Means

### Linear Regression, Grade Attained: A **September 2020 – December 2020**

- Became proficient in applying Ordinary Least Squares and Multiple Linear Regression models
- Constructed hypotheses tests and used models for prediction and explanation
- Selected models using ANOVA Test, backward elimination, forward selection, and stepwise regression
- Applied shrinkage methods such as Ridge and Lasso Regression to achieve higher predictive accuracy
- Performed diagnostic tests for normality, heteroskedasticity, and linearity using formal and informal methods
- Coded a “one-stop-shop” regression function in JupyterNotebook which read in a dataset and target variable, and output the best model, metrics and, diagnostics

### Data Structures & Algorithms, Grade Attained: A **January 2020 – May 2020**

- Implemented the following sorting algorithms: Quicksort, Insertion Sort, Merge Sort and Bubble Sort
- Implemented the following search algorithms: Binary Search Tree, Linear Search, Binary Iterative Search and Binary Recursive Search
- Analyzed the Big-O and Big-Theta running times of algorithms

## TECHNICAL SKILLS

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- Programming Languages: Python (Proficient), Java (Intermediate), R (Intermediate)
- Website Design: HTML/CSS