Joseph Alan Lane

Data Analyst

California

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Skills

Roles: Data Analytics | Machine Learning | Data Visualization | Web Development

Languages: R | Python | Tableau | Excel | SQLite | HTML | CSS | JS | C++ | Matlab

Packages: sklearn | keras | matplotlib | ggplot2| olsrr | dplyr | tidyr| plotly | scipy | numpy | pandas

Work experience

Data Analyst Consultant   May 2021 - August 2021

Lawrence Livermore National Labs

- Built a machine learning pipeline in Python for comparing the performance of ground penetrating radar technologies, used for bomb detection. It included PCA reduction, logistic regression, model storage, k-means clustering, precision-recall curves, ROC's, Andrew's curves, and confusion matrices.
- Verified best radar type performance among 36 different radars types, reducing time needed for exploratory analysis by several months.
- Customized over 15 pipeline features saving the GPR team over 3 months of programming and establishing the first investigative methods for future research tools.

Web Developer (Part-time)   June 2020 - Current

Greiner Agencies Inc.

- Managing and maintaining QOPBASEBALL.COM through HTML, CSS, JavaScript, R, and SQLite on a Linux
- Reduced data download and wrangling times by 75%.
- Added automated error correcting that reduced CEO intervention by 90%.
- Added automatic email updates of relevant seasonal changes for immediate CEO insight.

Data Analyst   May 2018 - August 2021

Biola University

- Team analyst on a variety of MLB controversies through a patented statistic (Quality of Pitch—QOP™).
- Team lead in the investigation on the 2017 and 2019 home run controversies, quantifying pitch deception, predicting injury susceptibility in pitchers, and illegal sign stealing detection. Resulting work and papers produced 3 publications by the world's most famous MLB publishers.
- Recruited and grew analytics team by 100%.
- Trained unexperienced team members to become full contributors in under 2 months.

Education

Dual B.S. in Applied Math (Data Science Con.) and Western Classics   May 2017 - May 2021

Biola University

- Team lead for various consultations through the BIOLA QUANTITATIVE CONSULTING CENTER.
- Survey validation on business assessment diagnostics for the V.P. of ASSOCIATION FOR STRATEGIC PLANNING. Reduced ambiguity on over 5 fundamental factors, confirm testing reliability for production. (Jan. - May 2021)
- Design of Experiment and financial analysis around the donation methods of OPEN DOORS USA. Leading organizational reform and potential operating cost reduction by $500,000. (Jan. - May 2021)
- Founder and president of the Math club and the Philosophy/Theology club which brought together over 40 undergrad and graduate thinkers.

Publications and Additional Awards

- SIGN STEALING REPORT CORROBORATES EVIDENCE AGAINST ASTROS AND RED SOX. The Orange County Register. Aug 19, 2020.
- EXPLAINING THE MLB HOME RUN RECORD OF 2019 WITH QUALITY OF PITCH. The Hardball Times. October 21, 2019. FULL REPORT HERE. (Keynote presentation for CBU's ASA meeting of 2020)
- EXPLAINING THE MLB 2017 HOME RUN RECORD WITH QUALITY OF PITCH The Hardball Times. May 8, 2018.
- Graduate of The Torrey Honors College.