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

- Saved the Ground Penetrating Radar (GPR) team over 3 months of programming by customizing over 15 features in a Machine Learning pipeline and established the first investigative methods for future GPR research.
- Reduced time needed for exploratory analysis by several months through verifying best radar performance among 36 different radars types.
- Built a machine learning pipeline in Python for comparing the performance of GPR technologies, used for bomb detection. It included PCA reduction, logistic regression, model storage, k-means clustering, precision-recall curves, AUC-ROC's, Andrew's curves, and confusion matrices.

Web Developer (Part-time)   June 2020 - Current

Greiner Agencies Inc.

- Reduced CEO intervention by 90% by adding automated error correcting in uploaded data.
- Reduced data download and wrangling times by 75%.
- Automated real-time information to CEO on relevant seasonal changes as data is evaluated.
- Managing and maintaining QOPBASEBALL.COM through HTML, CSS, JavaScript, R, and SQLite on a Linux server. Several million rows of seasonal data wrangled and turned into summary statistics for the QOP calculator.

Data Analyst   May 2018 - August 2021

Biola University

- Doubled analytics team membership and trained unexperienced members to become full contributors in 2 months.
- 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 4 publications by the world's most famous MLB publishers.

Education

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

Biola University

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

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 QOP The Hardball Times. May 8, 2018.
- Graduate of The Torrey Honors College.