

JOSEPH ALAN LANE

DATA SCIENTIST | PROGRAMMER | NETWORK ENGINEER



JOSEPHALANLANE@GMAIL.COM



(805) 990-4502



[HTTPS://WWW.LINKEDIN.COM/IN/JOSEPH-LANE-102204149/](https://www.linkedin.com/in/joseph-lane-102204149/)

WORK EXPERIENCE

DATA SCIENTIST CONSULTANT | LAWRENCE LIVERMORE NATIONAL LABS | FEBRUARY 2021 - CURRENT

- Through a successful relationship in previous semester's consultations, I was tasked with building a python tool for assessing and comparing the performance of ground penetrating radar technologies, used for bomb detection.
- Constructed a thorough ML pipeline beginning with preprocessing data, model optimization and training, model deployment, and subsequent analytics. These were supplemented with various visualizations including confusion matrices, precision-recall curves, ROC's, Andrew's curves, and other aids. The pipeline also featured PCA, logistic regression, model storage, k-means clustering, and other various statistical features. Results summarized and made accessible through a python script.
- For Official Use Only designation.

WEB DEVELOPER | GREINER AGENCIES INC. | JUNE 2020-CURRENT

- Managing and maintaining QOPBASEBALL.COM through HTML, CSS, JavaScript, R, and SQLite.
- Updating seasonal data and computing various statistics for the QOP calculator. Seasonal data size is typically several million rows by about 200 columns.

DATA ANALYST AND SABERMETRICS RESEARCHER | BIOLA UNIVERSITY | MAY 2018-CURRENT

- Lead research assistant heading various projects concerning MLB pitching, several of which resulted in national and local publications (listed below). The main analysis utilized:
 - Our locally patented statistic (Quality of Pitch—QOP™) to investigate a variety of MLB concerns including the home run controversies of 2017 and 2019, quantifying pitch deception, predicting injury susceptibility in pitchers, and illegal sign stealing detection.
 - Data wrangling, visualizing, and analysis through R (ggplot2, plotly, dplyr, tidyr,...etc.), Python (matplotlib, sklearn, keras...etc), and Excel.
 - Various statistical approaches including GLM's, Neural Networks, Cluster Analysis, and a variety of rudimentary statistical tests.

PUBLICATIONS AND ADDITIONAL AWARDS

- [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.
- [SIGN STEALING REPORT CORROBORATES EVIDENCE AGAINST ASTROS AND RED SOX](#). The Orange County Register. Aug 19, 2020.
- Graduate of The Torrey Honors College.
- Eagle Scout—Elk's Lodge; Moorpark, California.



JOSEPHALANLANE@GMAIL.COM



(805) 990-4502



[HTTPS://WWW.LINKEDIN.COM/IN/JOSEPH-LANE-102204149/](https://www.linkedin.com/in/joseph-lane-102204149/)

SKILLS

Data Science
 Machine Learning
 Data Visualization
 Data Wrangling
 Big Data Analytics
 Web Development
 Data Engineering
 Network Analysis
 Network Engineering

R
 Python
 Tableau
 SQLite
 HTML
 CSS
 JS
 NodeJS
 Koa
 C++
 Matlab

EDUCATION

B.S. DUAL DEGREE IN APPLIED MATHEMATICS (DATA SCIENCE CONCENTRATION) AND WESTERN CLASSICS | BIOLA UNIVERSITY **| MAY 2017-MAY 2021**

- Participated in several data driven projects and organizations during my studies as an Applied Math/Data Science student. Provided consultations through the [BIOLA QUANTITATIVE CONSULTING CENTER](#) on the following projects:
 - Lead semester consultant for [LAWRENCE LIVERMORE NATIONAL LABS](#) on the assessment of various bomb detecting radar technologies. Paid to continue work into Summer 2021 to develop a more robust tool in Python, which is described above. (January - May 2021)
 - EFA analysis on a business assessment diagnostics for the V.P. of [ASSOCIATION FOR STRATEGIC PLANNING](#). (January - May 2021)
 - Design of Experiment and financial analysis around the donation methods of [OPEN DOORS USA](#). (January - May 2021)
 - Assisted in various trials in the medical, sociological and psychological fields. (January - May 2021)
- Assisted recruitment and establishment of a student-led data analytics team for researching sabermetrics under Dr. Jason Wilson. (May 2018 - May 2021)
- Founding president of the Math club and the Apologetics (Philosophy/Theology) club. (January - December 2020)