

JOSEPH ALAN LANE

DATA ANALYST | WEB DEVELOPER | NETWORK ENGINEER

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WORK EXPERIENCE

DATA ANALYST CONSULTANT | LAWRENCE LIVERMORE NATIONAL LABS | MAY 2021 - AUGUST 2021 | PROJECT COMPLETED

- Built a machine learning pipeline in python for comparing the performance of ground penetrating radar technologies, used for bomb detection. Visualizations included precision-recall curves, ROC's, Andrew's curves, confusion matrices, and other aids. The pipeline also featured PCA, logistic regression, model storage, k-means clustering, and other various statistical features.
- References and Letter of Recommendation available upon request.

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

- Lead research assistant in using 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, 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 uses of GLM's, Neural Networks, and clustering.

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

- Managing and maintaining QOPBASEBALL.COM through HTML, CSS, JavaScript, R, and SQLite on a Linux server.
- Seasonal data is analyzed and made available on QOP calculator.

SKILLS

Data Analytics
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

- Lead various consultations through the [BIOLA QUANTITATIVE CONSULTING CENTER](#).
- Lead semester consultant for [LAWRENCE LIVERMORE NATIONAL LABS](#) on the assessment of bomb detecting radar. Paid to continue work into Summer 2021, described above. (January - May 2021)
- Survey validation on 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 recruitment and establishment of a student-led data analytics team for researching sabermetrics under Dr. Jason Wilson. (May 2018 - May 2021)

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.
- 3D Printer troubleshooting, repair, and deployment.