JOSHUA FAURE

Data scientist

Melbourne, Victoria

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LANGAUGES

R (R Studio)

Tidyverse, Ggplot2, RShiny, RMarkdown, Tidymodels, Esquisse, Mlr, RCrawler, Rvest, Caret, Janitor, Plotly, Magrittr, Broom

Python

Scikit-learn, Pandas, NumPy, Matplotlib, SciPy

Other technologies

Tableau, git, SQL, Microsoft PowerBI, Matlab, SPSS, Minitab, MS Office Suite, Linux Shell, SAS

TECHNICAL SKILLS

Classification

Random Forest, XGBoost, K-NN, SVM, Logistic Regression, Naive Bayes, LDA, Light GBM, SIR, SAVE

Regression

Linear, Multiple Linear, PLS, Mixed Effects, Random Forest, XGBoost, Light GBM, SIR, SAVE

Clustering

UMAP, tSNE, K-Means, PCA

Other technical skills

Statistical hypothesis testing (t-tests & ANOVA), Data cleaning and interpretation, Root cause analysis, Project management, Process mapping

WORK EXPERIENCE

2020 - Present **Senior Statistician**

CSL Behring

Developed interactive tool to automate statistical process control across entire product line life cycle, reducing department workload by approximately 1.7 FTE.

2017 - 2020 **Senior Data Scientist**

Aspex Consulting

Created internal tool to predict likelihood of a proposal's success, saving approximately $100,000/year in unsuccessful proposal writing.

Produced patient uptake model for community health initiative, resulting in improved patient screening, program's cost effectiveness, and obtaining recurrent government funding of $1 million/year.

Enhanced patient landscape dashboard, with underlying demand driver model, to inform decision making and workforce allocation improving transparency and efficiency for client.

Developed patient cost predictive model to manage expenses of health service, and provide targeted organisational improvements, saving a potential $20 million annually.

2017 **Data Scientist**

BAE Systems Applied Intelligence

Developed social clustering product to identify and prevent insurance fraud. POC showed a potential saving of $450 million over prior 5 years.

2013 - 2017 **Statistical Consultant**

La Trobe University

Built predictive model, as part of broader diagnosis tool, to provide most likely cause of gait issues, which halved consultation time for clinical podiatrists.

PERSONAL PROJECTS

2020 **How can an NFL team make the jump into the playoffs?**

Saw sustained success across select organisations, and found that the primary driver of playoff success was being able to stop teams from scoring.

This information could be used to drive drafting and free agency strategies.

Future improvements to model include adding: free agency acquisation information; off-season draft information; and projected opponent data.

2020 **What facets of gameplay leads to victory in the AFL?**

Found that time of possession was the biggest factor (causative or correlative?).

Across different areas of the field, winning the turnover battle and having efficent ball usage saw an increase in win likelihood.

This information could be used to help coaches drive training routines and game play strategies to help improve chances to win.

EDUCATION

2013 - 2021 **Doctor of Philosophy (Applied Statistics)**

La Trobe University

Thesis title: Novel approaches to dimensionality reduction

2009 - 2013 **Bachelor of Science (Honours)**

La Trobe University

Majors: Mathematics & Statistics

Thesis title: High dimensional linear discriminant analysis: overfitting?