

# Max Boonjindasup

☎ 818-428-0901 ✉ mboon1228@gmail.com 🌐 MaxBoonjindasup

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## Skills

- Languages: Python, SQL, R, Excel, Git, Matlab
- Tools: BigQuery, Tableau, Power BI, OpenCV, Docker
- Modeling: Regression, Classification, Neural Networks, Random Forest, PCA
- Statistics: Hypothesis Testing, A/B Testing, Multivariate Analysis

## Relevant Experience

### Manager, Beverly Hills Arthritis Associates

11/2021 – 11/2022 | Beverly Hills, CA

- **Automated data cleaning and analysis** of accounting ledger using *Excel* and *Python* scripts to **identify unpaid accounts, recovering \$100,000 in profit.**
- Reviewed claims, referrals, medication usage, and office visits to **model trends in treatment costs, providing monthly revenue estimates and insights into improving patient churn reduction.**
- Led a team to **analyze claims, document data in Epic EHR,** and manage +120 med-legal cases.

### Research Associate II, Smidt Heart Institute, Cedars-Sinai

03/2021 – 10/2021 | Los Angeles, CA

- Implemented 3 *Excel* templates to **automate data collection and analysis, improving efficiency and accuracy by an estimated 20%.**
- Leveraged statistical modeling to analyze complex datasets for gene expression and protein concentration determination.
- Researched the interplay between extracellular vesicles, macrophages, and T-cells in muscle regeneration.

### Associate Scientist, Amgen

07/2019 – 01/2021 | Thousand Oaks, CA

- Prototyped an **end-to-end system that seamlessly automates Amgen's workflow** to accelerate precise data capture, rigorous analysis, and comprehensive reporting for diverse projects, **culminating in a company-wide presentation and project lead role.**
- Oversaw the development of 9 drugs from discovery to FDA approval and eventual market release.

## Education

### Bachelor of Science, University of California San Diego

09/2014 – 06/2018 | La Jolla, US

Cognitive Science (Machine Learning & Neural Computation)  
Biochemistry

## Certificates

Google Advanced Data Analytics | IBM Data Science

Data Science in Healthcare

## Projects

### Diabetes Prediction 📌

- **Trained** and evaluated **3 classification models** (*LR, RF, GB*) on 100,000 medical records in *Python* using *scikit-learn* to **predict diabetes** in patients and **reduce healthcare cost.**
- *Gradient Boosting* outperformed other models, achieving an **92% recall** and **91% AUC**, potentially **enabling early diabetes detection and improving health outcomes by up to 50%.**

### Job Layoff Analysis 📌

- Uncovered a **200% surge in US layoffs, with Tech bearing 44.5%** of the layoffs, Consumer 15.3%, and Retail 12.8% using *Plotly*, providing businesses to make informed workforce decisions.
- Developed a **highly accurate ( $R^2=1.000$ ) Random Forest model for layoff prediction** using *scikit-learn* in *Python*, informing talent decisions and risk mitigation.

### Predicting Employee Retention 📌

- Created an **employee attrition model** (*XGBoost* - **98% accuracy and precision**) using *Python* that identified 5 key factors for improving employee tenure, **leading to a projected 20% increase in resource management and employee satisfaction.**
- Conducted statistical analysis of employee departure and **identified a significant correlation between the assignment of > 4 projects and a 200% increase in employee turnover.**
- Cleaned, processed, and analyzed a 5-year employee dataset to predict employee retainment and visualize insights through *Pandas, Seaborn, & Tableau.*

### Skin Cancer Detector 📌

- Built a skin lesion model (*CNN* - **95% recall and F1 score**) using *Python, OpenCV, & Tensorflow* that **classifies 7 cancer types** based on clinical images of skin cancer patients.
- Enhanced healthcare data analysis by applying the **computer vision** model to identify trends and outliers, **significantly improving patient outcome projections and revenue forecasts.**

### Heart Disease Predictor 📌

- Developed an **ensemble of machine learning models** (*kNN, NN, XGBoost, DT, SVM*) in *Python* to **classify heart disease** using cross-validation and *GridSearchCV* for optimization, resulting in a **neural network with nearly 100% accuracy.**
- Performed exploratory data analysis on ~900 patient samples through *NumPy, Pandas, & Matplotlib* to identify patterns, handle missing/categorical data, and standardize variables.