# Max Boonjindasup

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## Education

09/2014 – 06/2018
La Jolla, US
**Bachelor of Science,** University of California San Diego
Cognitive Science with a Specialization in Machine Learning and Neural Computation

09/2014 – 06/2018
La Jolla, US
**Bachelor of Science,** University of California San Diego
Biochemistry and Cell Biology

## Relevant Experience

11/2021 – 11/2022
Beverly Hills, USA
**Manager,** Beverly Hills Arthritis Associates
- **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 patient data in Epic EHR**, and handle +120 med-legal cases.

07/2019 – 01/2021
Thousand Oaks, USA
**Associate Scientist,** Amgen
- 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 subsequent leadership role** for ongoing development.
- Oversaw the development of 9 drugs from discovery to FDA approval and eventual market release.

## Freelance Consulting

08/2023 – 10/2023
**Skin Cancer Detector**
- Built a deep learning model (*CNN* - 95% recall and F1 score) using *Python* and *Tensorflow* that **classifies** 7 **skin cancer types** based on clinical images of skin cancer patients.
- Identified trends and outliers in healthcare data by leveraging the CNN model to **enhance accurate patient outcome projections and revenue estimations**.
- Deployed the model on a **website to accept photos and help identify malignant lesions**.

07/2023 – 08/2023
**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*, and *Tableau*.

04/2023 – 05/2023
**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*, and *Matplotlib* to identify patterns, handle missing/categorical data, and standardize variables.

## Publications

**Individual Alpha Frequency Determines the Impact of Bottom-Up Drive on Visual Processing**
Stephanie Nelli, Aayushi Malpani, **Max Boonjindasup**, John T Serences, Individual Alpha Frequency Determines the Impact of Bottom-Up Drive on Visual Processing, Cerebral Cortex Communications, Volume 2, Issue 2, 2021, tgab032, https://doi.org/10.1093/texcom/tgab032

**Alpha entrainment of posterior visual cortex impacts visual detection**
Stephanie Nelli, **Max Boonjindasup**, Aayushi Malpani, John Serences; Alpha entrainment of posterior visual cortex impacts visual detection. Journal of Vision 2017;17(10):976.

## Skills

Languages: Python, SQL, R, Git, Matlab

Tools: BigQuery, Tableau, Power BI, Docker, Excel

Modeling: Regression, Classification, Neural Networks, PCA

Statistics: Hypothesis Testing, A/B Testing, Multivariate Analysis

## Certificates

- Google Advanced Data Analytics
- IBM Data Science
- Data Science in Healthcare