

Max Boonjindasup

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Relevant Experience

Operations Manager, Beverly Hills Arthritis Associates

11/2021 – 11/2022 | Beverly Hills, CA

- Spearheaded the development of an **automated data cleaning pipeline using Excel macros and Python scripts**, boosting **efficiency by 60% and uncovering \$100,000** in recoverable profit from unpaid accounts within 6 months.
- Implemented a new Epic EHR data documentation system, reducing errors by 15% and ensuring accuracy in over 1,000 patient records, potentially improving patient care through enhanced data quality.
- Led a team of analysts to process insurance claims, ensuring efficient management of over 120 complex med-legal cases.

Research Associate II, Smidt Heart Institute, Cedars-Sinai

03/2021 – 10/2021 | Los Angeles, CA

- **Automated data collection and analysis with 3 custom Excel templates**, reducing data processing time by 80%.
- Unveiled key associations between gene expression and protein levels using **hypothesis testing** and **statistical modeling**.
- Researched the interplay between extracellular vesicles, macrophages, and T-cells in muscle regeneration.

Associate Scientist, Amgen

07/2019 – 01/2021 | Thousand Oaks, CA

- Pioneered an **end-to-end system that seamlessly automates Amgen's workflow and creates comprehensive analysis reports in Spotfire**, reducing analysis time and resource consumption by 60%. This innovation culminated in a company-wide presentation that earned the recognition of the vice president and propelled me to the project lead role.
- Oversaw the development of 9 drugs from discovery to FDA approval and eventual market release.

Projects

Machine Learning Approaches to Mental Health Diagnosis

- Performed exploratory data analysis (EDA) on ~300,000 patient records to reveal a concerning trend: nearly 60,000 students globally struggle with mental health, with a significant portion (54%) being male students from the US.
- Built a **98% accurate XGBoost model to classify patient susceptibility to mental health difficulties** as low, medium, and high.

Spotting Diabetes Early: A Model for Improved Outcomes

- **Trained and evaluated 3 classification models** (Logistic Regression, Random Forest, Gradient Boosting) on 100,000 medical records in Python using *scikit-learn* to **predict diabetes** in patients and **reduce healthcare cost**.
- *Gradient Boosting* achieved a best-in-class performance an **92% recall** and **91% AUC**, potentially **enabling early diabetes detection and improving health outcomes by up to 50%**.

Identifying Individuals at Risk of Heart Disease

- 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.

2024 Job Market Analysis

- **Identified 200% increase in US layoffs** with *Plotly*, **pinpointing Tech (44.5%)**, Consumer (15.3%), and Retail (12.8%) sectors, empowering businesses with actionable workforce insights.
- Developed a **highly accurate ($R^2=1.000$) Random Forest model that predicts layoffs** using *scikit-learn* in Python, driving informed talent decisions and risk mitigation.

Predicting Employee Retention

- **Created an employee churn model** (*XGBoost* - 98% accuracy & precision) using Python that identified 5 key factors in employee turnover and **projected a 20% improvement in resource management and employee satisfaction**.
- Analyzed a 5-year employee dataset using *Pandas*, *Seaborn*, & *Tableau* to uncover insights and identify a **strong correlation between assigning > 4 projects and a 200% surge in employee attrition**.

Certificates

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

Education

Bachelor of Science, University of California San Diego

09/2014 – 06/2018 | La Jolla, CA

Cognitive Science (Machine Learning & Neural Computation) | Biochemistry

Skills

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