

# Haochen (Keira) Zhu

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## EDUCATION

**University of Southern California**

**Los Angeles, CA**

M.S. Business Analytics

June 2022

GPA: 3.8/4.0

**University of California, Irvine**

**Irvine, CA**

B.A. Business Economics

June 2020

Major GPA: 3.8/4.0

**Collegiate Awards:** Dean's Honor List, 6 quarters

## SKILLS

- Programming platforms: Python, R, SQL, NoSQL, JMP Pro, Tableau, PowerPoint, Excel
- Tools: pandas, NumPy, Scikit-learn, Seaborn, Pyplot, Plotly, ggplot, Matplotlib, PySpark, Hadoop

## EXPERIENCE

**Data Analyst Intern**

Los Angeles, United States

Stock Navigators

Jun 2021 - Aug 2021

- Collected and filtered interested data from Facebook analytics and company's csv files; removed and handled missing values and outliers using pandas and NumPy in Python
- In order to improve the effectiveness and usefulness of the final result, conducted the exploratory data analysis (EDA) which includes data mining and data visualization to generate valuable insights for designing and specifying further process of marketing analysis
- Built and trained machine learning (ML) models (random forest, gradient boosting, PCA) using Scikit-learn in Python to find significant drivers of sales and to predict revenues of major products
- Performed customer cluster analysis (k-means, Agglomerative, hierarchical) to segment customers in order to provide customer-based recommendations
- Improved 20% on revenue, by offering targeted marketing plans and adjustments to product contents derived from the analysis

**Marketing Data Analyst Intern**

Shanghai, China

Ctrip.com International, Ltd.

Sep 2019 - Oct 2019

- Used SQL to query desired the data of tourists' outbound number, sales, etc. from company's database
- Performed data wrangling to aggregate and map the data in order to discover meaningful trends and patterns in Python; plotted line/bar graph to illustrate the findings using Seaborn
- Increased working efficiency by 50% with automated Tableau dashboard to compute marketing metrics (market share, ROI, volume)
- Helped the company to cut 33% advertising cost, by offering alternative advertising channels based on the analysis and the desk research of competing firms

**Shanghai Strategic Business Analyst Intern**

Shanghai, China

Huawei

Aug 2019 - Sep 2019

- Visualized the data of government budgets on cloud related topics and researched on policies and news of government/distributors
- Discovered \$10M potential sales opportunities, by suggesting new customer source in the government projects

**Risk Management Analyst Intern**

Shanghai, China

China Pacific Life Insurance Co., Ltd (CPIC)

Aug 2018 - Sep 2018

- Analyzed and illustrated the company's cash, money market fund and buy-back ratio based on company's database
- Improved the workflow efficiency by 70%, by setting up new Excel equations detecting the bug in subsidiary companies' sales reports; exceeded manager's expectations

## PROJECT

**Energy Company Load Forecasting competition**

Oct 2021 - Dec 2021

- Performed robust data cleaning and data pre-processing on energy load data to prepare for the time series model
- By using A/B testing mechanism, selected best model among time series models (ARIMA, MSTL, ETS) and Machine Learning models (Neural networks, XGBoost, GBM) in R and Python, increased the accuracy from 80% to 95%
- Did hyper-parameter tuning to further increase the accuracy and feature engineering to create useful variables (lag, week, Hour\*temperature, etc. based on SOTA paper), improved my champion model accuracy from 94% to 97% on the actual data sets
- Won the 1st place of the competition and awarded by the International Institute of Forecasting (IIF)

**European Call Option**

Feb 2021 - Apr 2021

- Predicted the option price using the interest rate, maturity and past strike price by implementing regression/classification models (Neural Network, k-nearest neighbors, decision tree) using Scikit-learn in Python to reach an accuracy of 93% on test sets

**King's Hawaiian Bakery & Restaurant**

Aug 2020 - Dec 2020

- Visualized the data from company's sales, marketing and warehouse Excel file by using Matplotlib, Seaborn and ggplot in Python
- Due to outstanding performance, presented actionable and insightful business recommendations directly to the company's managers

## LEADERSHIP

**The Hedge Fund Society | Vice President of External & Social Affairs | Irvine, CA**

Oct 2018 - Oct 2019

- Boosted the engagement rate from 11% to 35% by communicating and organizing popular events more effectively

**Chapter of Beta Alpha Psi at University of California, Irvine | Member | Irvine, CA**

Sep 2019 - Present

- Selected by the business honor society for outstanding academic achievements