

Albert W. Zhou

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EDUCATION: John Carroll University

- **B.S. Major:** Data Science, **Minor:** Actuarial Science, Dec 2022
- **Honors Program Graduate**, Class of 2023, GPA 3.4
- **Dean's List Recipient (4 semesters)**
 - awarded in recognition for achieving a semester GPA of over 3.5 on a 4.0 scale in four semesters, with an overall Spring 2021 GPA of 3.8, Fall 2021 GPA of 3.6, Spring 2022 GPA of 3.7, and Fall 2022 GPA of 3.8.
- **Magis Scholarship (4 years)**
 - Selected as scholarship recipient for demonstrating strong academic performance during a rigorous high school curriculum and through high standardized test scores

EXPERIENCE (SCHOOL PROJECTS)

Time Series Forecasting for Stock Market Prices, Fall 2022

- Learned 1) Auto-Regressive Integrated Moving Average (ARIMA) model, a classical statistical method, and 2) Long Short-Term Memory (LSTM) network in a deep machine learning architecture based on an artificial Recurrent Neural Network (RNN).
- Predict stock market prices based off historical data including opening price and closing price patterns to determine future price trends
- Compared results from ARIMA and LSTM models to evaluate accuracy
- Led data gathering and analysis within a group, then independently developed ARIMA and LSTM models in Python; Final project results were presented in class.

Python Spotify Analysis, Spring 2022

- Built a logistic multivariable regression model to predict whether a given song would likely fit in a particular playlist from users
- Download playlists from Spotify
- Visualized model performance with a confusion matrix to test accuracy of model results
- Utilized the Pandas, Numpy, Matplotlib, NLTK, OS, and Sklearn libraries in Python
- Headed a five-person team with a leading role in development of the regression model

Mental Illness and Sleep Report, Spring 2022

- Investigated how mental illnesses, such as panic attacks, depression, anxiety, and bipolar disorder, impact quality of sleep
- Utilized data from the American College Health Association's 2011 National College Health Assessment
- Applied a Pearson Chi-squared test using language R
- Collaborated in a group of three to evaluate correlations between sleep issues and various mental illnesses

House Pricing Analysis Project, Fall 2021

- Analyzed how market variables such as quality, style, square footage, and more impact the sale price of houses using multiple linear regression and stepwise comparison methods
- Extracted relevant data points from a Kaggle database to evaluate and run diagnostic reports and construct a regression model using R Studio
- Led and collaborated with a group of four students to analyze and evaluate data to generate a conclusion on the pricing of homes in Ames, Iowa

World Happiness Report, Spring 2021

- Assessed and discovered correlations between happiness and GDP, freedom, and life expectancy of multiple countries' populations using Structured Query Language (SQL)
- Calculated and mapped the relationship between several variables and each country's happiness to ultimately visualize the comparison and assess which countries ranked the highest in happiness vs. the lowest
- Headed the group of four students as the focal for modeling and plotting data and generating ideas and questions to evaluate

SKILLS

CODING LANGUAGES: Python, R, SQL, Java, JavaScript, HTML

SOFTWARE PROGRAMS: Microsoft Suite, Google Suite, SPSS, R Studio, Jupyter, Eclipse, Brackets, Google Cloud

DATA SCIENCE COURSES: Applied Regression Analysis, Intermediate Data Science, Database Systems, Intro to Data Science, Intro to Software Application Development, Advanced Data Science, Data Science Final Project

STATISTICS AND MATHEMATICS COURSES: Basic Probability, Applied Statistics, Mathematical Statistics, Intermediate Statistics with SPSS, Actuarial Mathematics, Discrete Mathematics, Calculus and Analytical Geometry I-III, General Physics I & II

BUSINESS AND LEADERSHIP COURSES: Global Leadership, Principles of Economics I-II, Audience Matters, Creativity & Innovation, Moral Decision Making

ADDITIONAL SKILLS: Communication, Coordination, Project Management, Leadership, Spanish

EMPLOYMENT / VOLUNTEERING

McDonald's · Crew Member · Westlake, OH August 2018 to July 2021

Marc's · Cashier · Westlake, OH December 2016 to August 2019

Cleveland Clinic · Volunteer · Cleveland, OH January 2015 to August 2019

REFERENCES

From John Carroll University Department of Mathematics, Computer Science, and Data Science

Rebecca Fang – Professor and Chair – rfang@jcu.edu

Barbara D'Ambrosia – Former Professor and Chair – bdambrosia@jcu.edu – 330-212-6464

Elena Manilich – Assistant Professor – emanilich@jcu.edu