

# XYZ Wang

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## EDUCATION

**Revelle College, University of California, San Diego**

La Jolla, CA

*Bachelor of Science in Mathematics(Applied)*

Oct 2020-May 2024

**CGPA:** 3.687/4.0

- *Provost Honors*, Seven Times, UCSD, 2020-2023.
- Courses Highlight: *Introduction to Probability, Math Statistics, Principles of Microeconomics, Principles of Accounting, Introduction of Analysis I, Applied Linear Algebra, Combinatorics, Calculus.*

**Lancaster Catholic High School**

Lancaster, PA

Jan 2018-May 2020

## ACADEMIC & RESEARCH PROJECTS

**WTI Crude Oil Price Forecasting for the Next Year Using ARIMA Model**

La Jolla, CA

*First Author, Supervisor: Professor Peter Kempthorne*

Sept 2023-Nov 2023

- Analyzed a five-year monthly dataset of WTI crude oil prices from Trading Economics using Python, ensuring data quality and integrity.
- Conducted thorough time series analysis to determine non-stationary behavior with a stationary trend, making it suitable for modeling and implemented the ARIMA model to provide insightful forecasts.
- Evaluated model performance of ARIMA, ETS and BSTS by comparing out-of-sample mean absolute percentage error and residual analysis.

**Memory Optimization for Large-scale Parallel Training Systems**

Beijing, China

*Research Assistant, Institution of High Performance Computing, Tsinghua University*

Jul 2023-Aug 2023

- Researched existing methods and tools to optimize memory utilization strategy in training large CLIP models.
- Developed a universal ZeRO (deepspeed version) configuration tool for the research group's parallel training tasks, which automates parameter tuning and maximizes per GPU throughput.

**Exploring the Influence of Different Factors on Diabetes**

La Jolla, CA

*Math189 Course Project*

Jun 2023

- Analyzed the superior performance of the LDA model compared to the QDA model in predicting diabetes based on decision boundary and confusion matrices analysis.
- Explained the rationale for adopting LDA in larger datasets and analyzed the observed positive relation between glucose level, BMI, and diabetes based on the LDA model.

**A Method of Analyzing Customer Churn of Credit Cards by Using Logistics Regression**

Beijing, China

*CAS Research Center on Fictitious Economy & Data Science*

Jul 2019-Sept 2019

**Patent Number:** 2019101158 (<https://patents.google.com/patent/AU2019101158A4/en?q=2019101158>)

**Advisor:** Professor Yingjie Tian

- Contributed to the research project on building an effective model for credit card churn forecasting by utilizing logistic regression, confusion matrix and ROC curve.
- Responsible for data processing, organizing code base, empirical evaluation reference searching tasks.
- Studied literature on regression models applied in credit prediction; helped optimize the logistic regression model, which yielded 0.91 accuracy in out-of-sample tests.
- Responsible for the writing of Methods and Summary parts of the paper.

## PUBLICATION

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- Wang Tianxiang, the first author, WTI Crude Oil Price Forecasting for the Next Year Using ARIMA Model, (Manuscript No.: IFMPT-6179).
- > Accepted by the 2024 3rd International Forum on Mathematical Statistics, Physical Sciences and Telecommunication System (IFMPT 2024).

## PRACTICAL EXPERIENCES

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### Hengtai Securities, Guang'anmenwai Street Branch

Beijing, China

*Assistant Investment Advisor, Business Department*

Jul 2023-Sept 2023

- Organized current asset management products and compared them to identical products on the market.
- Produced client information profiling reports based on clients' risk appetite and net value and provided matching and asset allocation suggestions for the company's investment products.
- Joined meetings with prospective customers and performed presentations of investment products and existing client cases under guidance.

### Chinese Global Youth Summit

La Jolla, CA

*Member of the Western American Region*

Sept 2021-Dec 2021

- Assisted in organizing the annual Chinese Global Youth Summit on 2021.
- Contributed to revising the interview process and conducting mock interviews.

### Beijing EasyTransfer Commercial Services Co., Ltd.

Beijing, China

*Campus Marketing Coordinator in the Business Marketing Group*

Mar 2021-Sept 2021

- Studied the company's existing businesses, including oversea payment, foreign exchange and cooperation with US firms on international student car rental and automobile services, etc.
- Conducted client research on the company's cross-border remittance business for Chinese students studying abroad; proposed to group new clients based on user characteristics.
- Proposed to improve and extend the current business model incorporating oversea credit card issuance and insurance purchasing services.
- Assisted in developing statistical models to produce a ranked list of recommended client services based on user attributes; conducted analysis on feature importance.
- Won the Top Sale Honor of the West Coast Division of the United States, including businesses like oversea tuition payment, oversea credit card issuance and student life insurance.

## OTHER INFORMATION

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- **Languages:** Mandarin (Native), English (Fluent).
- **Computer Skills:** Frequent User of Excel, PowerPoint, Word; Proficient in Matlab and R; Elementary in Python.