# PROFESSIONAL EXPERIENCE

**Bureau of Economic and Information** May **2021-May 2022**

*Researcher, Department of Economic Analysis Shantou, China*

* Conducted a comprehensive risk assessment of the city’s pension fund through stress tests and scenario analyses, reducing potential risk exposure and safeguarded the fund’s long-term stability
* Forecasted the GDP of Shantou city for 2022 using multiple linear regression and vector autoregression, achieved a 90% prediction accuracy which directly improved the efficiency of the budgeting department
* Implemented the industrial upgrading policy by conducting surveys of benchmark cities with successful industrial transformation, provided senior economists with better insights

**Claremont Graduate University Sep 2018-Aug 2019**

*Research Assistant, Department of Politics and Economics* *Claremont, CA*

* Implemented capital flows analysis by Monte Carlo simulations which achieved a 20% improvement in forecast accuracy and improved investment outcomes
* Identified extreme scenarios utilizing generalized extreme value (GEV) distribution which uncovered high-risk scenarios to avoid potential losses in investment
* Developed key indicators to measure capital control policies through a comprehensive dataset covering restrictions on both inflows and outflows, achieved a more granular analysis of capital control effectiveness

# EDUCATION

## Claremont Graduate University Sep 2016-Dec 2023

## *PhD, Economics Claremont, CA*

## GPA 3.6/4.0

## Courses: Game Theory, Dynamic General Equilibrium Modeling, Time Series, International Finance et al.

## Claremont Graduate University Sep 2014-Jun 2016

Master of Arts in Economics *Claremont, CA*

GPA 3.6/4.0

* Courses: Statistics, Econometrics, Microeconomics, Macroeconomics, Financial Economics et al.

# RESEARCH EXPERIENCE

## Loan Default Prediction with Machine Learning Jun 2024-Jul 2024

* Performed comprehensive data cleaning, including handling missing values, outlier detection, and categorical variable encoding, ensuring the dataset was accurate, complete, and ready for model training
* Utilized Python libraries such as Pandas and NumPy for data manipulation, and applied feature engineering, such as principal components analysis (PCA), correlation matrix analysis, to enhance the dataset’s predictive power
* Employed predictive models, such as Logistic Model, Random Forest, and Neural Networks, to predict loan defaults and tuned models through rigorous testing, like confusion matrix, achieving 86% prediction accuracy

## Causal Effects of Economic Policies on Banking Crises Dec 2023- Jan 2024

* Confirmed a positive relationship between volatile capital flows and the occurrence of banking crises in emerging markets using historical data analysis
* Applied Conditional Logistic Regression and Logistic Regression models to analyze the causal effects of capital controls, macroprudential policies, and exchange rate regimes on banking crises

## Positive Feedback Trading in Real Estate Investment and Stock Markets May 2020-Jun 2020

* Developed a theoretical model predicting that positive feedback trading would result in negative autocorrelation and higher volatility of returns, mitigating risks associated with market predictability and volatility
* Performed regression analysis on real-world data to estimate the model’s coefficients, utilizing ARCH-in-Mean and GARCH models to validate the anticipated increase in volatility
* Conducted backtesting to compare positive feedback trading with the CAPM model, providing data-driven insights into the risks of market strategies driven by feedback loops which reduced potential financial losses

# ADDITIONAL INFORMATION

* Programming: Python, R, SQL, STATA, LATeX, MS office
* Presented the research “Capital Controls and Banking Crises in Emerging Makrets” at the 99th Annual Conference of the **Western Economic Association International (WEAI)**, with publication of the paper currently underway