DI WANG

diwangemail@gmail.com ‖ 814-954-9450 ‖ www.linkedin.com/in/di-wang-psu

EDUCATION

The Pennsylvania State University, State College, USA *May 2025 (expected)*
PhD in Economics *GPA: 3.8/4.0*
Dissertation: Vertical Integration in the Carbonated Soft Drinks Industry

Center for Monetary and Financial Studies (CEMFI), Madrid, Spain *June 2020*
Master in Economics and Finance, Merit-Based Half-Tuition Waiver *GPA: 81/100*

The Chinese University of Hong Kong, Shenzhen, China *May 2018*
Bachelor of Business Administration (Economic Science), Deans' List: 2015-2018 *GPA: 3.6/4.0*

EXPERIENCE

The Pennsylvania State University, World Campus, Instructor *July - Aug 2022*
- Managed Intermediate Microeconomics (Online) for 43 students, achieving a students rating of 6.75/7
- Oversaw a team of 2 teaching assistants to streamline grading and exam preparation

Bank of Spain, Madrid, Spain, Research Intern *July 2019 - Sep 2019*
- Solely led a project to analyze decoupling between energy consumption and economic growth in Spain
- Performed variance decomposition revealing that structural changes reduced energy intensity by 60%+

PAPERS

Vertical Integration in the Carbonated Soft Drinks Industry
- Applied causal inference (diff-in-diff) to find integration increased piggybacking products prices by 0.06%-6% and decreased others by 0.8%-1.3%
- Developed a structural model of consumer behavior and firms' integration and pricing decisions
- Estimated parameters using GMM and numerical methods, applying extensive data sets
- Demonstrated that foreclosure incentives of vertical integration may outweigh efficiency incentives

MFN Clauses and Non-pricing Competition in E-book Markets
- Developed mathematical models to analyze platforms' agency pricing and publishers' innovation efforts
- Computed optimal pricing and investment strategies and equilibrium points using numerical methods
- Identified conditions where non-pricing parity contracts enhance innovation and new product launches

DATA PROJECTS

Classifying Pets' Facial Expressions *May 2024*
- Classified images of animals' emotions across 7 species and 4 emotion categories
- Built and trained a Convolutional Neural Network (CNN) model; improved fitness via transfer learning
- Tuned hyperparameters, the best model achieving 80% validation accuracy

Instacart Market Basket Analysis *Feb 2024*
- Built machine learning models to predict consumer repurchase using detailed purchase history data
- Trained Logistic Regressions and Gradient Boosting Decision Trees, and performed feature engineering
- Selected hyperparameters with K-Fold Cross Validation; best model has RMSE 0.13 or 1/4 of a SD

SKILLS

Programming	Stata, R, Python, Matlab, SQL
Machine learning	Causal Inference, Regression, Random Forest, Gradient Boosting
Statistics	Regularization, Cross-Validation, A/B Testing, Hypothesis Testing
Software Development	Object-Oriented Programming
Languages	Chinese (native), English (fluent), Japanese (elementary)