

# GIOVANNI COLITTI

## EXPERIENCE

2018  
|  
Current

### ● **Data Scientist**

Grimmway

📍 Bakersfield, CA

- Trained machine learning models in R to forecast important business metrics including sales and field-level yield; forecasts improved predictive accuracy by 30-50% over previous methods.
- Implemented linear programming problems in R to optimize planting and harvesting activities.
- Performed complex data cleaning and exploration on large datasets.
- Analyzed field trial data in R using appropriate statistical methods.
- Developed an R package for cross-validation of time-series data with irregular time slices (tidyroll).
- Created Shiny apps and dashboards to visualize forecasts, implement dynamic optimization problems, and generate automated reports.
- Managed database tables using R and SQL.
- Created an R package to interface with the CoAgMET weather network API (coagmetr).
- Used Docker and ShinyProxy to publish applications and reports internally.
- Performed sample size calculations and provided spatial sampling recommendations.
- Communicated analytical methods and results to the executive team.

2015  
|  
2016

### ● **Data Analyst Intern**

Small Business Development Center

📍 Camarillo, CA

- Analyzed small business metrics, such as revenue per employee, to predict which clients have the highest risk of bankruptcy.
- Used model predictions to efficiently allocate limited consulting resources to assist at-risk businesses.
- Trained executive team in statistical methods.

2014

### ● **Research Assistant**

California State University, Channel Islands

📍 Camarillo, CA

- Collected and cleaned data from various online sources using Stata programming.
- Created visualizations in Stata and wrote literature reviews of scientific articles related to Chinese & Indian stock, currency, and debt markets.



## EDUCATION

2018

### ● **National Taiwan University**

M.S. in Agricultural Economics (4.0 GPA)

📍 Taipei, Taiwan

2016

### ● **California State University, Channel Islands**

B.A. in Economics (3.8 GPA)

📍 Camarillo, CA

## CONTACT INFO

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in <https://tinyurl.com/yfrrpukt>

📄 <https://tinyurl.com/twxs92>

## SKILLS

**Analytical Methods:** regression, classification, feature engineering, linear programming and optimization methods, causal analysis, Bayesian and Monte Carlo methods

**Coding:** R (caret, fable, brms, rsample, recipes, lpSolve, shiny, data.table, dplyr, ggplot, plotly, rmarkdown, purrr, devtools, DBI), Stata, SQL, Git, Docker

**Languages:** English, Chinese

## COURSEWORK

R Programming (I/II)

Ecological Data Analysis in R

Quantitative Business Science

Econometrics (I/II)

Financial Econometrics

Web Applications in R with Shiny

Quantitative Methods

Applied Microeconomics

Advanced Macroeconomics



## SELECTED RESEARCH

2018

- **Do Concealed Firearms Decrease Crime? An Analysis Using Active Concealed Firearm License Data in the United States**

Used a unique dataset on county-level concealed firearms permits and applied two-stage least squares estimation to show that concealed firearms do not decrease crime.

DOI: <http://dx.doi.org/10.6342/NTU201800993>

2018

- **Do HEVs Cause More Cyclist & Pedestrian Injuries?**

Used logit model & large UK accident-level dataset to show that quieter electric vehicles significantly increase pedestrian accidents net of other covariates including speed limit and urbanization. Also used Bayesian methods (MCMC) to estimate the posterior distribution and check for non-normality in estimates.

- **Effect of Hurricane Morakot on Agricultural Prices in Taiwan**

Used a difference-in-differences (DiD) event study model and a large transaction-level dataset to quantify the causal effect of Hurricane Morakot on vegetable prices in Taiwan, adding weight to the literature that claims weather is oftentimes the most important driver of local agricultural prices.



## ACADEMIC HONORS AND AWARDS

2018

- **Thesis Competition First Place Prize**

Master's thesis presentation competition first place winner.

2016

- **Taiwan Ministry of Education Scholarship**

Merit scholarship for post-graduate studies in Taiwan.

2016

- **Program Honors in Economics**

Selected by CSUCI Economics Department faculty for outstanding achievement.

2014

- **Wang Family Scholarship**

Merit scholarship for international study in Taiwan & Mainland China.

2012

- **President's Scholarship**

Highest scholastic achievement award in CSU system; only handful awarded annually.