

# GIOVANNI COLITTI

## EXPERIENCE

2022  
|  
Current

### ● **Apple - Services Engineering (contract)**

*Data Scientist*

 Remote

- Led the optimization of BigQuery table schemas and pipelines for trillions of rows of data, reducing query costs by over 90%.
- Contributed to the development of a K8s cost model, wrote an API to facilitate the extraction of cost information from the model, and designed a Shiny app for visualization and counterfactual analysis.
- Built tools to forecast resource clawbacks, streamlining reporting and planning processes.
- Developed and presented K8s usage reports, enhancing internal customer visibility and efficiency.
- Performed simulations to quantify the impact of new server configs on resource fragmentation.
- Developed an algorithm to improve scheduling efficiency by 25%.

2020  
|  
2022

### ● **Fieldin**

*Senior Business Intelligence Analyst*

 Remote

- Developed an app for interactive drag-and-drop creation of PowerPoint visualizations and tables, saving users hours weekly according to a survey.
- Created an algorithm for counting harvest loads by analyzing distance patterns, achieving 90% prediction accuracy.
- Developed an app for interactive mapping of machine data and apps for ad-hoc report creation, supporting the customer success team.
- Created and managed a platform for developing and publishing web applications using ShinyProxy.

2018  
|  
2020

### ● **Grimmway**

*Data Scientist*

 Remote


- Developed machine learning models to improve sales and yield forecasts by 30-50% over previous methods.
- Built a YOLO v5 object detection pipeline to generate carrot stand count estimates with 95% accuracy, dramatically decreasing costs.
- Developed LP models to optimize planting and harvesting, maximizing yield and meeting sales demand.
- Analyzed research trial data, performed sample size calculations, and provided spatial sampling recommendations to the agronomy team.

## 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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 <https://github.com/gacolitti>

 <https://GiovanniColitti.com>

 <https://tinyurl.com/yfrrpukt>

 <https://tinyurl.com/twxsa92>

## SKILLS

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

**Coding:** R (shiny, data.table, dplyr, ggplot, echarts4r, leaflet, tidymodels, fable, brms, lpSolve, golem), SQL (MySQL, PostgreSQL, GoogleSQL, MSSQL), Bash, Python, Stata, Javascript/HTML/CSS

**Tools:** Git, Docker, Google Cloud Platform, BigQuery, Visual Studio Code, RStudio

**Languages:** English, Chinese

## COURSEWORK

R Programming (I/II)

Quantitative Business Science

Econometrics (I/II)

Financial Econometrics

Web Applications in R with Shiny

Quantitative Methods



## 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.
- 2018 ● **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 casual 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.