

GIOVANNI COLITTI

EXPERIENCE

2022
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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.
- Automated tooling for customer chargebacks and built tools to forecast resource clawbacks, streamlining reporting and planning processes.
- Developed and presented interactive K8s usage reports, enhancing internal customer visibility and efficiency.
- Performed simulations to quantify the impact of new server configs on resource fragmentation and cost.
- Identified opportunities to optimize batch workload scheduling using custom scheduling simulations.

2020
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2022

● **Fieldin**

Senior Business Intelligence Analyst

 Remote

- Developed an app for interactive drag-and-drop creation of visualizations and tables in PowerPoint slides, saving users hours per week as revealed by a user 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 additional apps for ad-hoc report creation, supporting the customer success team.
- Managed database tables serving as the backend for the apps used to support the customer success team.
- Created and managed a platform for developing and publishing web applications using ShinyProxy.

2018
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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.
- Developed an R package for time-series cross-validation.
- Analyzed research trial data, performed sample size calculations, and provided spatial sampling recommendations to the agronomy team.

CONTACT INFO

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 <https://github.com/gacolitti>

 <https://GiovanniColitti.com>

 <https://tinyurl.com/yfrpukt>

 <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



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



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.