Rosa Paula Cuevas

rochiecuevas@gmail.com | 925-844-4768
LinkedIn: https://linkedin.com/in/rosa-paula-cuevas | GitHub: https://github.com/rochiecuevas

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Career Summary

Data scientist with experience in food science. Thrives in multidisciplinary teams that devise data-driven solutions for real-world problems. Generates insights from large datasets using Excel, R, and Python. Communicates impactful stories to stakeholders.

Technical Skills:

Languages: R, Python
Data Visualisation and Manipulation: pandas, matplotlib, ggplot2, circlize, gridExtra, corrplot
Statistical Analysis: scipy, numpy, agricolae
Machine Learning: caret, lmtest, car, tm
Others: command line

Projects

WeatherPy
- Analysed weather metrics relative to distance from the Equator and from the Prime Meridian
- Created a dataset containing at least 500 cities using OpenWeatherMap and Google Maps Geocoding APIs
- Summary statistics and graphs were generated using Python, Pandas, and Matplotlib

Academy of Py
- Compared school performance metrics (standardised tests) between charter and district schools
- Summary statistics and graphs were generated using Python, Pandas, Matplotlib, SciPy, and NumPy

Rice classification by quality
- Used machine learning to classify rice within the same amylose class into different quality types
- Summary statistics and graphs were generated using R, caret, ggplot2, randomForest, nnet
- Designed experiments, generated data, and led the write-up of the peer-reviewed publication

Drivers of food choice of high-income urban Filipinos
- Used text analytics to extract information and find food choice patterns from outputs of an expert elicitation workshop and from data obtained in a consumer survey
- Summary statistics and graphs were generated using R, tm, corrplot
- Designed and implemented the consumer survey, conducted text data mining, and led the write-up of the peer-reviewed publication

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Experience

International Rice Research Institute – Los Banos, Laguna, Philippines
Scientist (2015–2018)
- Headed and managed the Sensory Evaluation Laboratory
- Developed the "gastronomic systems research" framework with a team of social scientists and used it to develop insights on food choice behaviours in India and in the Philippines
- Applied data analytics in generating insights from rice grain quality data (e.g., machine learning)
- Provided technical expertise for resolving consumer food safety issues of the Philippine government

Consultant (2014–2015)
- Generated descriptive sensory profiles for a diverse collection of rice varieties
- Trained in-house members of the rice sensory panel (descriptive sensory analysis)
- Liaised with restaurant industry stakeholders in promoting Philippine heirloom rice varieties with unique organoleptic properties

Post-doctoral Fellow (2010–2014)
- Established the in-house rice sensory evaluation team
- Developed statistical methods for evaluating team and individual performance
- Collaborated with a team of plant breeders and molecular biologists in selecting rice breeding lines in a varietal improvement program (East Africa) based on organoleptic quality metrics

Professional Service Staff (2008–2010)
- Created databases (MS Access) and work packages critical to the development of the Grain Quality and Nutrition Centre's full-cost recovery program for client services
- Investigated associations between starch chemistry and various alleles linked with indicators of organoleptic and cooking quality in a large collections of rice samples

Education

Certificate, Data Analytics and Visualisation Boot Camp (2019)
University of California, Berkeley Extension – San Francisco, CA, USA

PhD Agricultural Science (2009)
University of Queensland – Brisbane, QLD, Australia
Doctoral Thesis: Starch microstructure and functional properties in waxy rice (*Oryza sativa* L.)

BSc Biology (2002)
University of the Philippines Los Banos – Los Banos, Laguna, Philippines
Magna cum Laude
Thesis: Production and utilisation of crude tylosin from high-yielding *Streptomyces fradiae* NRRL 2702 Mutant No. 93 as therapeutic agent in broilers