Kristyn Pantoja

Texas A&M University, Department of Statistics

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Education

Texas A&M University

College Station, Texas

PhD Candidate, Statistics

Aug 2017 - May 2022 (expected)

- Scholarships & Awards: Ruth J. and Howard F. Newton Graduate Student Teaching Award (2019)
- Relevant Coursework: Machine Learning, Computer Experiments, Deep Learning, Design of Experiments, Bayesian Statistics

University of Pennsylvania

Philadelphia, Pennsylvania

BA, Mathematics (Minor: Philosophy)

Aug 2013 - May 2017

- Graduated magna cum laude

Experience

EMD Serono, Merck KgaA

Billerica, MA (remote)

Pharmacometry Intern

May 2020–Aug 2020

- Implemented a novel Bayesian experiment design for dose escalation in Phase I clinical trials in oncology using R and Stan
- Conducted simulation studies to compare the design method to rule-based and model-based designs
- Accepted for a poster session hosted by ASCPT

H-E-B

San Antonio, TX

Data Science Intern

May 2018–Aug 2018

- Implemented recommender system for complementary products using Siamese LSTM Neural Network using Keras (with Tensorflow backend)
- Aggregated transactional data and created labels for model training data based on similarity measures using SQL
- Demonstrated viability of model for predicting complementary products

Projects

Supervised log-ratios regression

Jing Ma, David Jones, Kristyn Pantoja

Oct 2020–Present

- Propose a microbiome-based prediction model that utilizes hierarchical clustering based on a novel distance measure to construct multi-resolution predictive signatures

Minimum energy designs for model selection

Kristyn Pantoja, David Jones, Rui Tuo, Huiyan Sang

Feb 2019–Present

- Propose a Bayesian experiment design method for regression problems where model selection and model checking are of interest
- Apply the design method to linear models, Gaussian Process models, and the variable selection problem

Word vectors for variational autoencoding topic modeling

Patrick Ding, Kristyn Pantoja

Sep 2018–Jan 2019

- Investigated the benefits of combining word embeddings and autoencoding topic models
- Implemented variational autoencoding topic models using pytorch

Publications

Accepted

- M. Z. Li, K. Gopalakrishnan, K. Pantoja, H. Balakrishnan (2020). "Graph signal processing techniques for analyzing aviation disruptions." *Transportation Science*.

Published

- M. Z. Li, K. Gopalakrishnan, K. Pantoja, H. Balakrishnan (2019). "Spectral approach towards analyzing airport performance and disruptions." *Thirteenth Air Traffic Management Research and Development Seminar.* (Best Paper: Performance Analysis and Metrics)

Skills

Programming Languages

R – Python – Stan – Rcpp

Other

Git – Markdown – LaTeX – Rstudio – cluster computing