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# Kevin Tsoi

katsoi.github.io

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LinkedIn: tsoisoi

## SKILLS

<b>Tools and Languages</b>	Python, SQL (PostgreSQL), R (RStudio), Tableau, Excel, Git, LaTeX
<b>Libraries</b>	Numpy, Pandas, Matplotlib, Seaborn, Scikit-learn, Jupyter
<b>Technical Skills</b>	<b>Regression</b> (Linear, Logistic, Polynomial, Time Series), <b>Classification</b> (K-NN, SVM), <b>Clustering</b> (K-means, Hierarchical), <b>Dimensionality Reduction</b> (LDA, QDA, <b>Principal Component Analysis</b> ), Association Rule Mining, Recommender Systems, Data Cleaning & Interpretation

## EDUCATION

**M.S. Mathematics** Aug 2020 — Dec 2022  
Cal Poly Pomona Pomona, CA

*Thesis: Clustering and Recommendation Systems for Instacart Delivery Orders*

**B.S. Mathematics** Sept 2017 — Dec. 2019  
Cal Poly Pomona Pomona, CA

## EXPERIENCE

**ARCHES Staff / Analyst + Lead Tutor** Aug 2020 — July 2022  
Cal Poly Pomona Foundation Pomona, CA

- Analyzed the effectiveness of the program using survey data provided from participants and created performance reports using Excel and LaTeX.
- Mentored students with disabilities in the ARCHES program whose goal is to provide academic assistance to students with disabilities.
- Provided mathematics and statistics tutoring from various lower division to upper division courses: (basic algebra to calculus to probability and statistics).

**SEES Staff / Statistics Learning Assistant** Sept. 2018 — Dec. 2019  
Cal Poly Pomona Foundation Pomona, CA

- Led and coordinated with statistics faculty to discuss weekly material for a statistics activity section.
- Created weekly worksheets for the course using LaTeX.

## LEADERSHIP AND ACTIVITIES

**Hackathon / DataFest 2019** May 2019  
Chapman University Orange, CA

- Medalist for *Best Use of Data Forensics* out of 30 teams.
- Handled and analyzed large data sets with millions of entries involving the Canadian National Women Rugby Sevens Team using SQL.
- Compared two week training schedules of players to tourney placements by creating visualizations using Tableau.

**Kappa Mu Epsilon Math Honorary / President** Dec. 2018 — Dec. 2019  
Cal Poly Pomona Pomona, CA

- Organized and led bi-weekly meetings with members to present math-related opportunities such as attending the Joint Mathematics Meetings, graduate school talks from faculty, and potential job prospects.

## PROJECTS

### Determining Humanitarian Aid to Underdeveloped Countries

- Used a Kaggle data set that contains information on socio-economic and health factors of 167 countries to determine which countries are in need of financial aid.
- Utilized K-means and hierarchical clustering methods to cluster countries into four levels of overall development.

### Forecasting Air Quality in Naples, Italy

- Analyzed and assessed carbon monoxide levels of Naples, Italy from 2004 to 2005 provided by the UCI Learning Repository.
- Applied linear smoothing and Kalman filtering methods to approximate missing values in the data.
- Constructed forecast models using seasonal ARIMA models and cross-validated them on the basis of AIC and BIC.