GARY IP

(510) 396-2163   gary.ip@gmail.com   github.com/gippoo

Experience

Irvington High School — Math Teacher   2014-Present

- Planned lessons applying the concept of the zone of proximal development resulting in better student understanding and improved sentiment towards math as evidenced by student feedback.

- Increased student exposure to spreadsheet usage and coding by creating an Excel/Google Sheets unit. Students gained experience working with large datasets and applying formulas to process the data. Reactions were overall positive and some students considered exploring programming more.

- Guided statistics students on research projects. Students learned how to come up with a statistical question, collect data, analyze the data, and present their findings.

eCosway — Accounting Supervisor   2011-2012

- Set up a pipeline for automated creation of discrepancy reports. This resulted in saving a huge amount of time and scaled well as the company opened more stores.

Projects

Histopathologic Cancer Detection

- Built a classifier using a simple convolutional network to identify the presence of cancer in images of lymph nodes.
- Utilized image processing and data augmentation on over 220,000 images.

AI Composed Music

- Converted midi files into piano roll matrix data in order to train a neural network based on autoencoder architecture. The model can "compose" music in the likeness of anime songs.
- Samples of generated songs can be found at gippoo.github.io/music

Toxic Comment Classification

- Used NLP on a dataset of comments posted online to train a Naive Bayes classifier to determine whether such comments are toxic or not.
- The model obtained 85% accuracy on a test set of comments and can be used as a means of anti-cyberbullying in products.

Skills

Data Science: pandas, matplotlib (seaborn), Jupyter Notebook, SQL
Machine Learning: scikit-learn, TensorFlow (Keras), NLTK
Programming: Python, JavaScript, HTML, CSS

Education

San Jose State University // Mathematics Credential // 2014
University of California, Irvine // Bachelor of Arts // Business Economics // 2010