Thomas Huang

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Technical Skills

Languages: C++, Python, SQL (SQLite), R
Developer Tools: IntelliJ, PyCharm, Visual Studio, VS Code, XCode
Libraries: pandas, NumPy, Matplotlib, scrapy, Tensorflow

Education

University of California, Los Angeles — Westwood, CA
Sept. 2019 – Present — *3.856/4 GPA*

Applied Mathematics Major, Specialization in Computing, Pre-Minor Statistics

Experience

Undergraduate Mathematics Reader — Mar. 2021 – Present
University of California, Los Angeles — *Westwood, CA*

* Assisted with reading/grading students' papers and exams under the guidance and direction of faculty members.
* Worked with various classes of 50-100 students and their concerns with regard to homework/quizzes on Gradescope.
* Spring '21: Differential Equations, Summer '21: Differential and Integral Calculus, Fall '21: Pre-Calculus

Undergraduate Mathematics Learning Assistant — Mar. 2020 – June 2020
University of California, Los Angeles — *Westwood, CA*

* Worked with faculty to teach, develop, and help foster collaborative learning for students using pedagogy techniques.
* Assisted groups of students with assignment and general inquiries within the course.
* Spring '20: Math 33B (Differential Equations).

Projects

Recipe App, March 2021 – June 2021 — https://github.com/thomhuang/recipe-app

Python – *pandas, PyQt5, scrapy, SQLite*

* Developed a recipe application intended for the home cook by webscraping recipes and integrating the data into an easy-to-use application.
* Scraped the title, author, ingredients, procedure, etc. from 976 different recipes using scrapy on www.SeriousEats.com (before and after the website updated their UI) from 24 different cuisines.
* Incorporated the data into an interactive application created with PyQt5 to search and view different recipes under various categories (Recipe Title, Author, Cuisine, Ingredients, and Tags) on an offline medium.

Instructional Blog Posts, March 2021 – Present — https://thomhuang.github.io/

Python – *Jekyll, pandas, plotly, seaborn, sklearn, Tensorflow*

* Cleaned and manipulated imported data of 342 penguins using pandas, to creating plots to observe the correlation between flipper (mm) length versus body mass (g) using seaborne.
* With 7366 data points of imported climate data, I used pandas and SQLite3 to demonstrate how to clean/manipulate the data to your specification, to answering various questions of the data by creating interactive plots such as estimating yearly temperature increases in India from 1980-2020.
* Explained how to create and optimize a spectral clustering algorithm (more efficient than KMeans as an example) to separate clusters with Numpy/Matplotlib using techniques within linear algebra.
* Introduced machine learning and explained how to create a 99.69% accurate machine learning algorithm to see the most effective method of analyzing an article using TensorFlow that was studied on 22,448 various news stories.