

Richard K. Yu

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Professional Summary

Transitioning professional with a diverse technical skillset backed by experience with quantitative sciences looking to further expand into programming-related industries.

Technical Skills

Computer: Javascript (Leaflet.js, D3.js, Plotly.js, Node.js, AJAX), Python (Flask, Keras, Pandas, Matplotlib, scikit-learn, NumPy), SQL, MongoDB, Excel, HTML/CSS, Tableau.

Languages: English (native), Mandarin (fluent).

Projects

[Functional Blog](#) - Python (Flask, SQLAlchemy), HTML, CSS

Hosted on a Linux server, this light Flask app features account creation and confirmation; password resets; post creation, updates, and deletion; and email validation with a backend using SQLAlchemy.

[World Happiness Analysis](#) - Javascript (Leaflet, D3.js, Plotly.js)

A website showcasing visualizations of happiness as a function of geography built using Leaflet.js and Vega. AJAX and Flask to handle responsiveness and backend communication.

[News Suggestions Using ML](#) - Python

An implementation of LDA in Python to extract lists of topics relevant to article text input by a user. API calls utilizing extracted topics populate news suggestions.

Work Experience

Studypool Inc., Mountain View, CA. *Head of Tutor Quality.*

May 2017 – June 2019

- Employed adaptive methods such as Bayesian forecasting to predict seasonal spikes in demand volume, allowing for an increase in the business' ability to satisfy large market shifts.
- Conducted statistical research to locate successful matching optimizations between freelance tutors and students and workload allocations for tutors accounting for profit margin, job stress, turnaround time, and expertise.
- Randomized quality assessments involving grammatical checks in addition to fluency and contextual topic analysis, handled troubleshooting and resolution of difficult quality cases to ensure client satisfaction.
- Spearheaded a project to create additional verticals for the company in online education.

Education

Rutgers University, New Brunswick, NJ.

January 2019 – July 2019

- Certification in Data Science and Visualization.
- Coursework in: Machine Learning, Python 3, VBA, MySQL, MongoDB, HTML, CSS, Javascript (D3.js and Leaflet.js visualization libraries), Tableau.

Vanderbilt University, Nashville, TN. *Cum Laude*

August 2013 – May 2017

- B.S. in Chemistry; B.A. in English. GPA 3.61/4.00
- Coursework in: Analytical Chemistry, Inorganic Chemistry, Physical Chemistry, Nanochemistry, Macromolecular Chemistry, Physics.

Internship Experience

Vanderbilt University Medical Center, Nashville, TN. *Researcher.*

January 2015 – May 2017

- Examined two main enzymes, CD73 and CD39, working to show how changes in the genotypes of these proteins have a regulatory impact on temporal cardiovascular outcomes in mice.
- Studied the effect of single nucleotide polymorphisms (SNPs) in CD73. Agarose gel electrophoresis, Western blots, PCR, and various imaging techniques relevant to interpreting the DNA of the mice.

Leadership Experience

Vanderbilt Student Volunteers for Science, Nashville, TN. *Student Teacher.*

February 2014 - May 2017

- Helped design a number of experiments to demonstrate basic scientific principles such as diffusion, inertia, momentum, chemical changes, and to explain the scientific reasoning behind those principles.
- Worked with 4th and 6th graders across a variety of magnet schools in the Greater Nashville Area as part of this effort, took an active leadership role in teaching students and in team management.

