

Huong Vu

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Education

- Ph.D. in Statistics (2020 – current)
University of California, Berkeley
- B.S. in Mathematical Analytics and Operations Research (2018)
University of California, Davis – GPA: 3.98 – Highest Honor

Research Experience

Research Assistant (Nightingale Open Science) June 2021 – August 2021

- Worked with clinicians to extract and pre-process EHR and medical data, especially International Code of Diagnosis (ICD), from Contra Costa Health Center's database to build a system of evidence for silent heart attacks
- Built machine learning models that use ECG waveforms to predict historical silent heart attacks and compared the predictions against evidence found above
- Created benchmarks for heart attack prediction accuracy on Contra Costa Health Center medical data by applying multiple algorithms well known for performing well on ECG

Research Assistant (Statistics Department, University of California, Davis) June 2017 – June 2018

- Assisted professor Alexander Aue in extracting and pre-processing California's catchments attributes and pesticide usages
- Explored methods to impute missing and censored data, analyzed using spatial and temporal models

Visiting Researcher (Muhlenberg College REU, Pennsylvania) June 2016 – August 2016

- Developed dynamic models for generating triples satisfied quadratic formulae based on Pythagorean triples; constructed winning strategies for Edge Removal Game on special graphs and expanded to Edge and/or Vertex Removal Game
- Identified and generated integer sequences using the On-line Encyclopedia of Integer Sequences

Employment

Graduate Student Instructor (University of California, Berkeley) August 2021 – present

- Spring 2022: Introduction to Statistics
- Fall 2021: Artificial Intelligence for Health and Healthcare

Data Analyst (1-800 Radiator & A/C) July 2018 – March 2020

- Constructing and maintaining databases used in Inventory and Pricing projects using SQL
- Exploring and examining hidden patterns then reporting results to stakeholders in visual and written forms using R.
- Assisting in building statistical and machine learning models in Inventory and Pricing projects.
- Building reports and automating data/reports weekly updating processes using Python, SQL and VBA.

Tutor (Richmond Youthworks, California) September 2015 – May 2016

- Provided guidance and mentorship for students at underserved high school on homework and college/scholarship applications
- Organized social activities and volunteer events such as LEGO Robotics, tree planting with Ground Work, Inc., and a field trip to San Quentin State Prison

Peer-lead Team Leader (Contra Costa College, California) January 2014 – May 2016

- Tutored 100+ college students in math, physics, and chemistry and assisted them in reaching academic goals
- Cooperated with other leaders to organize learning workshops where 80+ students participated in engaging math exercise

Papers

- Nguyen, D. M., Nguyen, T. T., **Vu, H.**, Pham, Q., Nguyen, M. D., Nguyen, B. T., & Sonntag, D. (2021). TATL: Task Agnostic Transfer Learning for Skin Attributes Detection. *arXiv preprint arXiv:2104.01641*.
- Nguyen, D. M. H., Nguyen, D. M., **Vu, H.**, Nguyen, B. T., Nunnari, F., & Sonntag, D. (2020). An Attention Mechanism with Multiple Knowledge Sources for COVID-19 Detection from CT Images.

- **Vu, H.** (2018). Monitoring Pesticide Concentrations: Database Time Series Analysis.
- Ediger, A., Moon, J., Mora, C., **Vu, H.**, Vukovich, D., Winkeler, Z., and Wong, L. (2016). Expansions on “A Game of Edge Removal on Graphs”.
- Benjamin N., Winkler, Z., Arian, R., Jaramillo, E., Ohanian, G., **Vu, H.**, and Reyes, N. (2016). Pythagorean Triples.

Honors and Scholarships

- 2021: Honorable Mention in the 2021 National Science Foundation (NSF) Graduate Research Fellowship Program (GRFP) competition.
- 2018: Highest Honor from Mathematics Department, University of California, Davis
- 2017: Yampol Egerman Scholarship
- 2016: Honors & Prizes Scholarship, Contra Costa College Mathematics Department Scholarship, Extended Opportunities Program and Service Transfer Scholarship
- 2015: Associated Students Union Leadership Scholarship, Sy & Beverly Scholarship, Contra Costa College Foundation General Scholarship
- 2014: Bernard Osher Scholarship

Leadership Activities

Vietnamese Teacher (San Pablo, California) August 2013 – March 2020

- Teaching Vietnamese language and cultures to K-12
- Arranged cultural and festival events such as Lunar New Year or Full Moon Festival

President of Vietnamese Students Association (Contra Costa College) June 2015 - May 2016

- Introduced Vietnamese cultures and history to community by organizing Vietnamese Cultural Days or workshops
- Strengthen Vietnamese community unity by hosting team building activities such as study group session and field trips.

Vice President of Associated Students Union (Contra Costa College) June 2014 – May 2015

- Represented students' opinions in college's committee meetings related to students
- Organizing community's activities for benefits of students such as Club Rush and Spring Dance