

Nathan Chan

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From SF Bay Area

Education

Bachelor of Science, Double Major in Statistics and Computer Science

Graduating June 2021

University of California, Davis

GPA 3.77

Minor in Political Science, completed Honors Thesis, 4x Dean's Honors List, Judicial Council in student government

Skills

- Languages: Python and R: numpy, pandas, ski-kit learn, matplotlib, beautifulsoup, tidyverse, ggplot2
- Tools: SQL, Jupyter notebooks, R Markdown, Git/GitHub
- Statistics: machine learning (supervised/unsupervised), neural networks, feature extraction, dimension reduction, linear and multivariate regression, probability, hypothesis testing, analysis of variance
- Data Science: data retrieval, data cleaning, data processing, data management, data analysis, data visualization
- Research: study design, research methods and implementation, database theory, massive datasets
- Excellent verbal and written communication skills, scientific writing and literature reviews, highly organized and extreme attention to detail, independent and hardworking

Experience

Data Scientist

May 2019 to Sep 2020

HERD Lab, UC Davis Center for Mind and Brain

Davis, CA

- Developed Python software (numpy, pandas) to web-scrape ozone/PM2.5 from government websites
- Merged 675 participants' data with ten datasets for air quality, education, unemployment, housing, traffic, water
- Created visualizations (matplotlib) for researchers on how variables changed with geography

Hibel Lab, UC Davis Department of Human Ecology

- Wrote R code (tidyverse) to collect, clean, process, and manage survey data for researchers
- Built a dashboard in R (shiny) to visualize survey data relationships
- Collaborated closely with graduate and doctoral researchers in psychology labs to meet research goals

Homework Grader for Statistics Classes

April 2019 to Feb 2020

UC Davis Department of Statistics

Davis, CA

- Graded homework from 450 students in upper-level statistics classes under professor's homework expectations

Research Assistant in Data Analysis

Sep 2017 to June 2018

UC Davis Asian American Center on Disparities Research

Davis, CA

- Performed multivariate regression and analysis of variance on survey data from 425 participants
- Gave recorded interviews with 30 participants as a study confederate to see how they deal with negative emotion
- Presented research at a conference on how ethnicity and gender influence emotions

Math Instructor

Feb 2017 to Sep 2017

Mathnasium Learning Center

Foster City, CA

- Taught math one-on-one to over 60 students K-12 from diverse backgrounds so students succeed in school

Projects (more at nathanjchan.com)

Finding Ice on Mars from Radar Images Using Computer Vision and Machine Learning

Summer 2020

- Learned the latest research about ice on Mars, computer vision, and machine learning
- Retrieved 23,650 radar images from NASA and Martian ice models from previous research
- Performed feature extraction and feature engineering to measure image texture in R
- Applied random forest machine learning, predict ice on Mars from radar image with 87% accuracy

Eagle Scout

May 2016

- Led teams in environmental projects and excursions. Leadership, team-building, and volunteering. And singing.