Emiko Sano

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SUMMARY

I'm a socially-conscious data scientist with critical thinking, research skills, and eagerness to learn. My lab researcher career developed my analytical skills and nurtured my constant curiosity. My fascination of finding the meaning behind relationships and correlation in data has brought me to the path of data science. I want to use my resourcefulness and expertise to find meaningful insights from data to help people's lives.

DATA SCIENCE EXPERIENCE/PROJECTS

General Assembly Remote
Data Science Immersive August 2020 - November 2020

- Predicting students' scores from NYC schools survey data
  - Using machine learning models (**PCA**, **linear regression**, **gradient boosting**) using **Python Scikit-Learn** module, found that the perception of safety in schools is important in how well students perform
  - Recommended schools to implement programs to address safety/bullying at schools
- Classification of sureddits based posts' text
  - Cleaned and analyzed text using **Python NLP** modules (**Countervectorizer**, **TfidfVectorizer**)
  - Optimized classification models (**Logistic Regression**, **Random Forest**, **Naïve Bayes**, **Decision Tree**) reaching ~90% accuracy for the best model
- Risk assessment due to COVID-19, wildfires, and earthquakes in California (Collaborative Project)
  - Generated a risk index using unsupervised learning (**PCA** and **clustering analysis**)
  - Visualized index on maps that can be accessed and guide disaster preparedness plans at the county level

EXPERIENCE

Freelance Missoula, MT/Remote
Science Expert Reviewer @ Study.com/ Private Biology Tutor November 2018 – Present

- Editing and fact-checking of educational science content (on a variety of topics) to bring the material to Study.com's standards while providing positive and constructive feedback to content writers
- Prepare material and break down complex concepts for biology high school students

The University of Montana Missoula, MT
Postdoctoral Researcher January 2013 - May 2018

- Produced preliminary findings that contributed to the award of a multi-lab, $8.2 million grant
- Led a microbial evolution research project from experimental design to statistical analysis (using R; t-test, Tukey's HSD Test, Regression Analysis) resulting in a publication in *Nature Ecology and Evolution*
- Collaborated and coordinated two extended visits to the University of Wisconsin to learn new lab techniques
- Trained and mentored all lab personnel (total of 12) who ranged from high school, summer interns, undergraduate, and graduate students: all of them are successful at pursuing their next career goals
- Managed the lab by placing orders, maintaining inventory, and maintaining various equipment
- Cleaned and *de novo* assembled bacterial genome *Illumina* sequences using Galaxy and command line

University of California, Davis Davis, CA
Postdoctoral Researcher January 2012 - December 2012

- Performed microbial physiology research to collect data for a genome-wide expression study (microarray)
- Used R to extract and transformed data to export to Excel files for analysis

University of California, Davis Davis, CA
Graduate Student Researcher/Teaching Assistant August 2004 - December 2010

- Conducted microbial genetics research (experimental design, data collection, and statistical analysis) that resulted in a publication in a peer-reviewed journal (*Genetics*) and issue-highlighted article
- Presented research at local to international scientific conferences in oral or poster presentations
- Taught a microbiology lab and two introductory biology courses for majors (a total of about 175 students); students who came consistently to my office hours increased their grades by half a grade or more over the term; the passing rate for all terms combined was at around 95%
- Mentored an undergraduate student for 3 years who eventually entered medical school

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Hologic (Formerly Gen Probe, Inc.) San Diego, CA
Research Associate (Temp) March 2004 – July 2004
- Carried out the company's proprietary assay for pathogen detection for data collection and analyzed data

San Diego State University San Diego, CA
Undergraduate Student Researcher January 2003 - February 2004
- Performed microbial ecology research (data collection and analysis) that resulted in an undergraduate research award and publication in a peer-reviewed journal (*Applied and Environmental Microbiology)*

SKILLS

Python | Jupyter Lab | Data Visualization | Statistical Data Analysis | Machine Learning | Natural Language Processing (NLP) | Artificial Neural Networks | Web Scraping
Basic knowledge: R (including ggplot2) | PostgreSQL | A/B Testing | Regex | Git | Bash | AWS | Tableau

EDUCATION

University of California, Davis Davis, CA
Ph.D. Microbiology
- Microbiology Graduate Group Representative to UC Davis Graduate Student Association (2 years)
- Intramural Sports Microbiology Soccer Team Organizer/Captain (2006-2010)

San Diego State University San Diego, CA
B.S. Biology with an emphasis in Cellular and Molecular Biology
- Graduated Magna Cum Laude

VOLUNTEER EXPERIENCE

Dat0s | A Minority Data Community Remote
Community Manager February 2021-Present
- Promoting engagement through interactions with members on Discord or virtual meetings on topics in data

Soft Landing Missoula Missoula, MT/Remote
Math and Science Volunteer Tutor March 2019-Present
- Working with refugee high school and middle school students to go over math and/or science homework

STARBASE Helena, MT
STEM Volunteer Role Model November 2017
- Promoted STEM careers to 5th graders in Helena through engagement with a real-world scientist

The University of Montana Missoula, MT
Diane Ebert-May Scientific Teaching Workshop October 2017
- Generated a lesson plan using student-centered instruction methods which can be accessed online

SpectrUM Science Museum Missoula, MT
Volunteer Role Model 2013, 2014, 2015 and 2016
- Presented various microbiology interactive activities and displays for children and other museum visitors