Zehong (Dominik) Li

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SUMMARY:

Passionate and meticulous Cognitive Science, Machine Learning, and Neural Computation major with a proven track record of successfully using Python, MATLAB, and Statistics to complete various projects efficiently. Ability to quickly learn new concepts, and work as a member of a team and individually.

EDUCATION:

University of California, San Diego   June 2023
Bachelor of Science in Cognitive Science Specialization in Machine Learning and Neural Computation

Honor: Provost Honors
Relevant Coursework: Computer Science, Neural Science, Data Analysis, Natural Language Processing, Statistics, Machine Learning, Cognitive Science, Calculus, Human-centered Design, Data Science

SKILLS:

Coding: Python (Numpy, Pandas, Matploltlib, Seaborn, PyTorch), HTML, CSS, Docker, R, MATLAB (NIMH Monkey Logic), React.js, Java, C++, SQL, GitHub Version Control, Signal Fx, GraphQL API, Jupyter
Technical: Natural Language Processing (NLP), Statistical Data Analysis, Neuroscience, Data Cleaning, Data Structure, and Algorithm, Ableton Live, FL Studio, Music Production, Machine Learning, Deep Learning

Languages: Teochew (native), Mandarin (native), English (proficient)
Interests: Music Production, Soccer, E-Sport, Cooking

PROFESSIONAL EXPERIENCE

Salk Institute | *Student Trainee*   August 2022 - Current

- Designing experiments with MATLAB and National Instrument Data Acquisition (DAQ) system
- Remodeling and upgrading the NIMH ML experiment design
- Cleaning and organizing lab station
- Gathering and analyzing data with Python

PROJECT EXPERIENCE

Salk Institute | N/A   Winter 2023

- Conduct experiments on participants and collect data to determine the factor behind the left or right-handed decision
- Redesign experiment code depending on the relevance of factors throughout the experiment duration
- Troubleshooting and problem-solving on experiments and code
- Summarize and draw conclusions based on the data gathered and provide analysis

University of California, San Diego |*Intro to Python* |Kanye West Discography Trivia   Spring 2021
GitHub Link: https://github.com/dominik0420/COGS-18-Project

- Created the trivia question pool
- Designed the Prompt-Answering function
- Implemented a rank system based on user's score over time

University of California, San Diego | *Data Science in Practice* | Prediction Model of Cryptocurrency Price with COVID Cases and Stock Market Index   Fall 2021
GitHub Link: https://github.com/COGS108/Group101-Wi22/blob/master/FinalProject_group101.ipynb

- Simplified the research question and refined the hypothesis
- Upgraded general formatting of the notebook
- Constructed analysis using Pandas, Numpy, Matplotlib, Patsy, Scipy, and Seaborn
- Implemented data description and analysis, and modified ideas on the analysis and the conclusion
- Analyzed gathered data and interpreted the analysis in the project video

Personal Project | *Dota2 Pro Circuit Data Analysis*   Seasonal, On-going
GitHub Link: https://github.com/dominik0420/dota2_dpc_data_analysis

- Extracted data from official Valve API and DatDota
- Constructed analysis using Pandas, Numpy, Matplotlib, and Seaborn
- Implemented data description and analysis and drew conclusions based on the analysis

RELEVANT COURSEWORK

Statistical Methods | *Math and Cognitive Science Department* | University of California San Diego   Fall 2022

- Learned statistical concepts, advanced analysis, and how they can be applied in real-life situations
- Leveraged R to complete statistical analysis and daily assignments
- Learned how to convert JSON to CSV and the other way around, and then work with such files in R.

Data Science in Practice | Cognitive Science Department | University of California San Diego   Winter 2022

- Studied basic machine learning concepts as long as how they can be applied to solve statistical problems
- Excelled Python to create ML models including natural language processing (NLP), linear regression, and logistic regression.
- Used Jupyter Notebook to conduct a full data analysis project.

Neuroanatomy and Physiology | Cognitive Science Department | University of California San Diego   Fall 2021

- Learned neuroanatomy and the mechanism behind neuron functions
- Used Neurons in Action (NIA) Lab to examine and studied neuron physiology and properties.
- Studied the mechanism of certain transmitters assisting neuromodulatory

Systems Neuroscience | Cognitive Science Department | University of California San Diego   Spring 2022

- Studied specific nervous system mechanisms and anatomy in vertebrates
- Learned about different brain measurements and how their properties can contribute to neuroscience research.

Supvr/Mach Learning Algorithms| Cognitive Science Department | University of California San Diego   Winter 2023

- Studied various supervised machine learning algorithms including decision trees, SVM, ensemble learning, logistic regression, and OLS.
- Acquired practical experience in implementing and evaluating the performance of these algorithms for data analysis and prediction tasks.