George Liu

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EDUCATION

University of California, San Diego

Sept. 2019 – Mar. 2023

B.S. Electrical Engineering w/ Specialization in Machine Learning and Control

Major GPA: 3.86 Minor: Economics

2023 Henry Booker Engineering Award, Provost Honors

RELEVANT EXPERIENCE:

IBM, Software Engineer/Open Source Developer | Python, HTML, CSS, Git

June 2023 - Present

- Developed Quantum-Safe website, integrating front/backend functionalities using HTML, CSS, and Python
 - o published course on IBM website, educating community about post-quantum cryptography
 - o helped prepare and attended presentation of website at 2023 TechXchange Conference
 - o collaborated with experts in quantum mechanics, cryptography, and digital circuits
- Developing automated pipeline that connects backend functionalities to dynamically update website
- Completed IBM Global Sales School; covering topics of management, client engagements, negotiation

Intel, Data Science Intern | Python, SQL, Excel, Git

June 2022 - Sept. 2022

- Optimized core distribution by evaluating demand variations and wafer utilization; saving \$2 million in profit
 - o Used Monte Carlo simulations for sampling materials/attributes from a chosen product
 - o Created website to forecast cost across products by analyzing wafer use and demand tradeoffs
 - o Used Plotly Dash/Express to create interactive graphs, legends, and drop down menus
 - o Met with customers to present POCs; presented final results drawn from statistical analysis
 - o Conformed to Intel's code org., used version control, virtual environment, unit/integration test
- Created script to generate material attribute distributions, material origin composition from a product demand using NumPy, Matplotlib, Plotly Dash, SciPy, and Scikit-learn
- Filtered/Cleaned/Organized FAB material data to website specifications using SQL, Pandas, and Excel
- 4x Intel Recognition Award: Results Driven and Quality work

Kneron, Software Development Intern | Python, MongoDB, Git

June 2021 - Sept. 2021

- Created script to differentiate between open/closed eye and mouth images, saved \$10k in cost
 - o leveraged overlapping labeled eye/mouth points, helped save over 100 hours of manual labeling
 - o Part of team of 20, communication through English and Chinese (Mandarin)
- Used Anaconda and LabelMe GUI in order to label facial/eye data points in images
- Organized data utilizing MongoDB, prepared data for training using Pandas and NumPy

PROJECTS:

- Designing personal website featuring timeline, images, links using HTML, CSS, JS
- Building restaurant recommendation system based on grocery receipts, which are automatically parsed o Features include Jaccard similarity (between restaurant and groceries), distance, overall rating
- Designed/programmed video game controller for PacMan using microcontroller and electrical elements
 - o Key concepts included sampling, signal processing, circuit building, and real time control
 - o Used Arduino (C,C++) for circuit control, Python to connect between sampling and controller