Daniel Chan

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EDUCATION

Bellaire High School | Houston, TX *May 2024*
Weighted GPA: 4.9/5.00; Class Rank: 28/660 & Graduated With Highest Honors

Boston University | Boston, MA *EXPECTED GRADUATION: May 2028*
Bachelor's in Computer Science

RESEARCH EXPERIENCE/WORK EXPERIENCES

Teacher Assistant | Houston, TX *June 2024 - August 2024*
The Houston Dragon Academy

- Taught 3rd & 4th Grade English and Algebra 1
- Led and supervised various recreational and educational activities, including the game room, sport classes (basketball, soccer, tennis, etc.), outdoor games, and robotics classes.
- Stepped in to assist with various tasks and activities whenever the need arose, ensuring smooth camp operations and a positive experience for all campers.

Data Science Intern | Houston, TX *June 2023 – Nov 2023*
MD Anderson's Department of Bioinformatics and Computational Biology

Under Dr. Philip Lorenzi and Dr. Iqbal Mahmud

- Analyzed and visualized different types of metabolomics data to explore metabolic pathways, networks, and off-target drug effects. Used software tools like Cytoscape, mixOmics R package, and TOXcms.
- Worked with a cross-functional team including biologists, data analysts, and mass spectrometry experts from MD Anderson Cancer Center and Agilent Technologies, providing exposure to the workflow from experimental design to data generation to data analysis.
- Tested whether multi-omic workflows are applicable to clinical research in the "Multi-omics Pathway Discovery for Biological Insights using Comprehensive LC/TQ Omics Workflows" project, which demonstrates how multi-omics data from mouse models can be integrated to assess drug toxicity and gain biological insights.

MIT x Harvard QuERY (Quantum Engineering Research and You) Program *February 2023 – May 2023*

Under Harvard PhD Candidate Scarlette Yu

- Applied machine learning methods on the 2D Ising model to predict critical temperatures/conditions for phase transitions through Python and Tensorflow
- Project Poster: Predicting the Critical Temperature of the Ising Model

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Summer Intern | Houston, TX *July 2022 – August 2022*
MD Anderson's Department of Bioinformatics and Computational Biology

Under Dr. Philip Lorenzi

- Examined the synergistic anticancer effect of a combination of L-asparaginase and IACS10759/Metformin against UV melanoma cancer cell lines through a wet lab experiment.
- Cleaned raw data from the experiment and analyzed data using Excel to determine effectiveness of treatments.
- Subcultured cancer cells for experimental usage.

COURSEWORK & SKILLS

Relevant Coursework: CS 131 Combinatorics (Discrete Math for CS), CS 112 Introduction to CS 2 (Data Structures), AP Computer Science A, AP Computer Science Principles, AP Statistics, AP Physics 1, AP Calculus BC, AP Physics C Mechanics
Programming Languages/Software Tools: Java, Python, C++, R, Git, Cytoscape, Microsoft Office Suite (Excel)
Libraries: Beautiful Soup, Pandas, NumPy, Tensorflow
Languages: English (Native), Mandarin Chinese (Fluent)

ACCOMPLISHMENTS

- **2nd Place** in the Advanced Division of HackerRank's Competitive Programming Competition at Seven Lakes HS (2023)
- **3rd Place** in the Advanced Division of HackerRank's Competitive Programming Competition at Clements HS (2022)
- Bronze President's Volunteer Award for 100+ Hours Of Service (2023)
- AP Scholar With Distinction (2023, 2024) & AP Scholar (2022)