Daphne Qin

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EDUCATION

Rice University - Houston, TX *May 2027*

Bachelor of Arts in Neuroscience, Pre-Medical Track, GPA 4.0

- Teacher's Assistant for Calculus 2
- Relevant Coursework: Fundamentals of Neurosystems, Organic Chemistry 1, Biochemistry 1, Fundamentals of Computer Engineering, Honors Linear Algebra, Honors Differential Equations

EXPERIENCE

Baylor College of Medicine - Houston, TX

Research Assistant at Bijanki Lab, Department of Neurosurgery *Jan 2024 - Present*

Quantify neuroimaging research relating paracingulate sulcus morphology to affective network connectivity under the supervision of Ms. Isabel Danstrom.

- Develop a novel semi-supervised machine learning algorithm using MRI imaging data and Python libraries to automatically characterize variable sulcal morphology surrounding the paracingulate sulcus.
- Analyze electrical stimulation data from epilepsy patients undergoing brain activity monitoring to determine cingulum bundle connectivity.

Rice Data Science - Houston, TX

Data Education and Exploration Program (DEEP) Contributor *Aug 2023 - Nov 2023*

Analyzed a public diabetes dataset in order to correlate different risk factors with positive diabetes diagnoses.

- Correlated BMI, HbA1c levels, and smoking with prevalence of diabetes using the Pandas, MatPlotLib, and Seaborn libraries for visualizations and models.
- Presented diabetes models and significance to a panel of over 50 students during the club-wide showcase; team won first place at the showcase.

Memorial Sloan Kettering Cancer Center - New York, NY

Intern at Boire Lab, Human Oncology and Pathogenesis Program *Jul 2022 - Aug 2022*

Conducted research on the effects of Id1 on leptomeningeal metastasis proliferation using cell culture and mouse models; supervised by Dr. Morgan Freret and Dr. Adrienne Boire (primary investigator).

- Reviewed literature to supplement ongoing research on Id1 behavior.
- Conducted in-vitro cell viability assays under hypoxic/normoxic conditions to study the behavior of Id1 in different environments.
- Prepared mouse brain slides for imaging to detect Id1 movement within the leptomeninges.
- Analyzed data using Graphpad to quantify the effects of Id1 proliferation under different environments.

SKILLS

Computer Science

Languages: Java, Python 3 (MatPlotLib, Pandas, SQLite3, scipy, scikit-learn, Nilearn, NiBabel), Bash

Tools: Ubuntu Linux (WSL 2 shell), Git; Object-Oriented Programming

Laboratory

Bench: viability/apoptosis assays, hypoxia chambers, anesthesia chamber preparation, micropipetting

Analysis: Graphpad, Excel

Spoken Languages

English (native proficiency), Mandarin Chinese (conversational), Spanish (conversational)

AWARDS & HONORS

President's Honor Roll *Jan 2024*

Awarded to the top 30% of students by GPA per semester; earned a 4.0 GPA during my first semester at Rice for this award.

Certificate for Excellence in Technology Education *Jun 2023*

Annually awarded to three graduating Stuyvesant High School students for high honors in technology-related education.

Thomas Richard and Julia Hadley Franklin Scholarship *Apr 2023*

Annually awarded to incoming Rice students based on scholarly standing.