

Daphne Qin

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EDUCATION

Rice University

Aug 2023 – May 2027

Bachelor of Science in Computer Science, GPA 3.94/4.0

Houston, TX

- **Relevant Coursework:** Game Design, Data Structures and Algorithms, Concurrent Programming, Object-Oriented Design, Computer Engineering, Computer Architecture, Neuroengineering
- **Awards & Honors:** Data Mentoring 2nd Place (2025), President's Honor Roll (2023/2024), Data Showcase 1st Place (2023), Certificate for Excellence in Technology Education (2023), Franklin Scholarship (2023-2024)

PROFESSIONAL EXPERIENCE

Computational Biology Researcher

Jun 2024 – Present

Baylor College of Medicine

Houston, TX

- Designed and implemented a multi-stage data processing pipeline to analyze millions of lines of uncharacterized data for 800+ proteins using Python and Bash script.
- Optimized data analysis runtime by 50% by introducing SLURM-based parallel job scheduling and concurrency optimization on an HPC cluster.
- Improved workflow for 10 professors and researchers, cutting cycle time by 20%, by developing interactive protein-to-genome relationship visualization platform using Flask.
- Collaborated in weekly Agile-style research sprints and presented technical findings to audiences of 100+ researchers and interdisciplinary stakeholders.

Machine Learning Research Assistant

Jan 2024 – Present

Baylor College of Medicine

Houston, TX

- Improved brain structure classification efficiency by 100% by developing a semi-supervised machine learning algorithm using Python scikit-learn.
- Enhanced classification accuracy by 15% by designing a novel estimation and flood-filling algorithm.

Peer Tutor

Aug 2024 – May 2025

Rice University

Houston, TX

- Led a team of 50 TAs to organize a campus-wide interactive simulation bringing the A-star algorithm to life, turning it into a hands-on learning experience for students.
- Mentored over 300 students during office hours on concepts including Markov chains, graph search algorithms, and predictive model fitting.

Software Engineer

Jan 2024 – Apr 2024

American Medical Women's Association

Houston, TX

- Optimized physician lookup times by 20% by implementing a server-side database caching system.
- Developed a personalized recommendation system for healthcare learning modules using HTML, CSS, JavaScript, and database caching to improve user experience.
- Contributed to a platform later featured on Fox 26 Houston and ABC 13, expanding reach to college students nationwide.

PROJECTS

AI-Driven Narrative Game | *Godot*, *Google AI Studio* | [GitHub](#)

Nov 2025 – Present

- Designed and implemented a modular game system integrating AI-generated character interactions with player-driven narrative state using Godot and custom Google AI integration.
- Built persistent dialogue memory, state tracking, and rule-based safety constraints to ensure deterministic, coherent character behavior across gameplay sessions.
- Engineered a low-latency signaling pipeline that parses AI-generated keywords to trigger in-game animations, decoupling game logic from AI services and improving responsiveness.

TECHNICAL SKILLS

Presentation: Public Speaking, Conflict Management (Doerr Institute Workshop)

Languages: Proficient in Python, Java, C, C++; Familiar with JavaScript, TypeScript, HTML/CSS, Shell, SQLite

Frameworks: REST APIs, Flask, JUnit, Cypress

Developer Tools: Git, Google AI Studio, VS Code, Visual Studio, PyCharm, IntelliJ, Godot

Libraries: Pandas, NumPy, Matplotlib, scikit-learn