# **QUELLA WANG**

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#### **EDUCATION**

## **Northeastern University**

Boston, MA

Bachelor of Science in Mathematics and Computer Science, GPA: 3.96/4.00

Expected, June 2026

Honors: Dean's List 2023-2025, Cum Laude Society, Frank Prentice Rand 1908 History Prize

**Courses**: Object-Oriented Design, Machine Learning and Statistical Learning Theory, Computer Systems, Statistics and Stochastic Processes, Algorithms and Data, Artificial Intelligence

**Activities**: Northeastern University Symphony Orchestra (NUSO) Violin 2, José Mateo Ballet Theatre YDP Level V, Graduate Student Data Club, MathEMA Mentor, Math Club

#### **SKILLS**

**Technical** Experienced in Python, C, Java, Javascript, MATLAB, SQL programming, LATEX, Git

Libraries React.js, Flask, PyTorch, Plotly, Pandas, NumPy, Sklearn, Seaborn, Node.js

Language Fluent in German, Cantonese; conversational in speaking Mandarin

#### **EXPERIENCE**

## Math Department, Northeastern University

Graduate Research Project: Brain CT Image Hemorrhage Segmentation

June 2024 - Present

- Designed and optimized scalable ETL pipelines using Python and SQL, improving data ingestion and transformation for large-scale medical datasets.
- Developed and integrated machine learning models for real-time image analysis, enhancing segmentation accuracy through feature extraction techniques such as GLCM (Gray Level Co-occurrence Matrix).
- Documented software architecture & data workflows to support team collaboration & long-term maintainability.
- Collaborated in a cross-functional team to implement automated processing workflows, increasing computational efficiency and reproducibility.

## **Khoury College of Computer Sciences**

Teaching Assistant – CS3000: Algorithms & Data Structure

January 2025 - Present

- Led weekly problem-solving sessions, explaining advanced algorithmic concepts such as graph theory, dynamic programming, divide and conquer, and NP-completeness to over 200 students.
- Provided one-on-one tutoring and debugging support in Python, Java, and C++, helping students implement efficient algorithms for real-world problems.
- Developed Python-based visualizations to demonstrate key algorithmic principles, enhancing interactive learning experiences.
- Liaison between students and Khoury administration, advocating for curriculum and resource improvements.

## Northeastern University Student Government Association (SGA)

December 2023 - Present

Voting Student Representative, University Undergraduate Curriculum Committee (UUCC)

- Analyzed and proposed curriculum changes impacting over 16,000 students, advocating for modernized CS & DS core requirements to reflect industry needs.
- Presented data-driven insights to faculty-led committees, ensuring evidence-based decision-making for academic improvements.

## Jane International Trading LLC, Analytics Intern

June 2022 - December 2023

- Developed interactive dashboards using Python, Pandas, and Matplotlib, enabling real-time data visualization for business intelligence.
- Automated data pipelines, reducing manual reporting efforts & improving decision-making efficiency by 30%.
- Managed data-driven trade analysis supporting international clients, contributing to over \$600,000 in transactions.

#### LEADERSHIP

## Oasis, Director of Resources

May 2024 - Present

- Created comprehensive resources for workshops on web development and backend systems.
- Organized and led technical development workshops, fostering a collaborative environment for peer learning & mentorship.

Boston Intercollegiate Government	(BIG), Northeastern Representative
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May 2024 - Present

- Represent Northeastern University as 1 of 2 delegates in a coalition of student governments from 30+ colleges in Boston.
- Advocate for the interests of over 150,000 college students in areas like housing, transportation, student rights.

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- Designed and led development workshops available to all students, fostering skill development.
- Contributed strategic insights and long-term planning in executive board meetings.