Jennifer Chiang

Personal Information

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Education

09/2019–current	**Northwestern University, Evanston, IL** *B.A. Candidate*, Major in Statistics (Departmental Honors Program) *Double Minor*, Computer Science, Materials Science *Expected Graduation: June 2023* Cum. GPA: 3.832/4.0 Major GPA: 3.967/4.0
08/2015–05/2019	**Morrison Academy, Taichung, Taiwan** *High School Diploma* *Valedictorian*, awarded with $500 scholarship *Honors*: National AP Scholar, 4 consecutive High Honors awards (GPA 3.80 or higher), Beijing Regionals NSDA Public-Forum Debate Octa-finalist *Activities*: Policy Debate, Student Council, Competitive Math Club Cum. GPA: 4.17/4.0

Publications

- Tzavelis, A., Rangaraj, V., Ouyang, W., **Chiang, J.**, Bedford, B., Palla, J., Rychlik, K., Rogers, J., and McColley, S. 534: A soft, flexible, wearable device for cough detection in pediatric cystic fibrosis patients. *Journal of Cystic Fibrosis Volume 20, Supplement 2* (2021)

- Tzavelis, A., Rangaraj, V., **Chiang, J.**, Bedford, B., Palla, J., Rychlik, K., Rogers, J., and McColley, S. P110: A soft, flexible, wearable device for cough detection in paediatric cystic fibrosis patients. *Journal of Cystic Fibrosis Volume 20, Supplement 1* (2021)

- A preprint for my independent research on the statistical analysis of human mortality and residual curves, which I will be first author for, is underway.

Research Experience

12/2020–current	**Undergraduate Researcher** *Grayson Research Group, Northwestern University*

- Conducted statistical analysis on mortality curves using the Grayson Group's newly developed and modified fit function. Analyzed recurring patterns in mortality residual data for over 200 data-sets.

- Currently exploring the hypothesis that the underestimation of senescent mortality at the data's tail could be explained by assuming an inhomogeneous distribution of Makeham-like populations.
- *Awards*: Received award of $3500 from the Northwestern Office of Undergraduate Research for 8-week, full time research for the summer of 2021.
- Employed under Northwestern University to continue the project for the summer of 2022.
- A preprint for this project, which I will be first author for, is underway.

12/2020–05/2021	**Undergraduate Research Assistant**
	John Rogers Research Group, Northwestern University

- Analyzed multiple sensor data collected from different test cohorts of patients and identified vocal events through audio and visual inspection of waveforms.
- Helped train the machine-learning algorithm to correctly distinguish between coughs from other sounds and COVID-19.
- Assisted in the assembly and production of COVID-19 sensors.
- *Conferences*: Third author of published abstracts in the North American Cystic Fibrosis Conference and European Cystic Fibrosis Conference.

06/2020–12/2020	**Undergraduate Research Assistant**
	Grayson Research Group, Northwestern University

- Examined and digitized data of slow relaxations in different physical systems such as bone and cartilage, and wormlike surfactant micelles.
- Fitted data-sets with the group's stretched exponential function describing charge carrier behaviors of different materials in a random walk-based simulation, using using the group's fit software.

TEACHING EXPERIENCE

09/2022–current	**Muntz Lassonde Undergraduate Teaching Assistant**
	Northwestern University

- Teaching assistant for Data Science I with Python.
- Led weekly office hours to assist students regarding assignments and course content. Assisted professor during lectures in answering questions.

09/2022–current	**Computer Science Peer Mentor**
	Northwestern University

- Peer mentor for Fundamentals of Computer Programming I.
- Led weekly tutorials for multiple student groups in which I instructed them in the programming language Racket. Hosted weekly office hours to assist students in assignments and course content.

09/2022–current	**Senior Engineering Analysis Peer Tutor**
	Academic Support and Learning Advancement, Northwestern University

- Senior tutor for the first-year engineering analysis sequence covering linear algebra and ODEs.

- Presided over and led peer tutor meetings, keeping fellow tutors up to date on course materials. Communicated the needs of fellow peer tutors to program managers, as well as updated guidelines from managers to tutors.

09/2021–current **Peer Tutor Coordinator**
Academic Support and Learning Advancement, Northwestern University

- Ensured that sufficient resources were readily available. Verified the attendance of tutors and tutees. Oversaw communications between tutors and program managers.
- Undertook responsibility during unexpected issues (i.e. fire alarms, technical issues) and coordinated with authorities in resolving them.

09/2021–09/2022 **Engineering Analysis & Economics Peer Tutor**
Academic Support and Learning Advancement, Northwestern University

- Tutored for the first-year engineering analysis sequence covering linear algebra and ODEs, as well as the Introduction to Macroeconomics course.
- Primarily focused on assisting and instructing students in debugging MATLAB assignments.

HONORS & AWARDS

05/2022–current **Honors in Statistics**: Admitted on the basis of a strong academic record and independent research, culminating in an Honors Thesis to be presented by the end of the senior year.

12/2020–current **Dean's List**: GPA of 3.75 or higher for multiple quarters.

06/2021–09/2021 **Undergraduate Research Award**: Received $3500 from the Northwestern University Office of Undergraduate Research for 8-week, full time research in an independent project on the analysis of human mortality data for the summer of 2021.

SKILLS & EXTRACURRICULARS

Skills

Programming   R Studios, SAS Analytics, SQL, Python, MATLAB, C, C++, HTML, CSS, Racket, DSSL2, Praat

Languages   English (Bilingual/Native), Mandarin (Bilingual/Native), Taiwanese (Proficient)

Extracurriculars

01/2022–current **Northwestern Materials Advantage Chapter Officer**
Treasurer

09/2019–current **Northwestern Materials Science Club**
General Member, Club Treasurer (01/2022 - current)

09/2019–current **Northwestern University Society of Women Engineers**
General Member

Updated: November 29, 2022