

Hi!

My name is Jennifer Xu, and I am a junior undergraduate student at UNC-Chapel Hill currently majoring in biostatistics. After seeing the various potential projects for this summer's Biomedical Informatics Summer Internship Program, I would like the opportunity to discuss my interest in this program.

As a biostatistics student, I am very interested in how we may understand and improve the quality of life for humans. Since recently taking a bioinformatics course at UNC, I grew curious about how I can apply computational and analytical methods to biological data. Through this course, I have learned about the significance of a multidisciplinary outlook at biological sciences and the importance of data analyses. I think that this program will allow me to practice the important skills required for large-scale analyses and contribute to the understanding of how we may use large scale biological data to gain insight into biology and medicine problems.

With my previous research experience, leadership, and analysis abilities, I believe that I will be a strong candidate for this program. Through these experiences I have learned not only how to think quickly in any situation, but to also work carefully and thoughtfully. As a research assistant for an access study, I speak with many clinics and work with data and databases. As a result, I have become proficient in thinking on the fly and remaining attentive to detail. Through my experience as a leader in my sport club as well as in a swim team, I have learned how to clearly express my ideas and work well in teams. Through my coursework, I also have experience with bioinformatics and bioalgorithms as well as with statistical analyses using programs like Python and SAS.

I would appreciate the opportunity to talk more, and I look forward to hearing back to discuss my interests in this program. Please let me know if there is any additional information that I can provide from my end. I may be contacted at jqxu@live.unc.edu or (919) 491-8071. Thank you for your time and consideration.

Sincerely,

Jennifer Xu

Jennifer Xu
(919) 491-8071
jqxu@live.unc.edu

Education

University of North Carolina at Chapel Hill, 2020 *2016 - Present*

- BSPH Biostatistics, Computer Science
- 2016 - present GPA: 3.95

East Chapel Hill High School (Chapel Hill, NC), 2016 *2012 - 2016*

- 4.0 GPA, Valedictorian

Technical Experience

Dr. Jessica Morse, Department of Obstetrics and Gynecology (Chapel Hill, NC) *2018 – Present*

- Research assistant for study on women's contraceptive access in North Carolina
- Conducted research study through investigating clinical environments as they pertain to patients and doctors
- Independently gathered data through persistent outreach to over 300 medical facilities
- Built out and maintained databases for intensive analysis

Select Coursework: COMP555 Bioalgorithms, BIOS511 Intro to Statistical Programming and Data Analysis

- Analyzed genomic data and developed programs to align sequences, find motifs, sequence protein peptides, match patterns, and conduct search trees using computational theories; analytical techniques included divide-and-conquer methods, greedy algorithms, dynamic programming, and graph algorithms
- Developed SAS programs to report, analyze, and assess data by managing complex data sets; compiled data into extensive reports and graphical analysis

Dr. Jing Mi, Duke University Department of Surgery (Durham, NC) *2014 - 2016*

- Demonstrated proficiency of techniques in molecular biology such as DNA amplification, cell culture, cell staining and imaging, and cell counting
- Aided in molecular biology technical methodologies such as DNA amplification and cell autophagy assay
- Co-wrote and coordinated experimental procedures for *In vivo selection against human colorectal cancer xenografts identifies an aptamer that targets RNA helicase protein DHX9* (published co-author)

Experience and Volunteering

Treasurer for UNC Women's Water Polo Club (Chapel Hill, NC) *2016 - Present*

- Managed financials and budgeting of team expenditures towards ensuring successful season goals
- Communicated and coordinated expenses with presidents, executive officers, and Sport Club directors
- Responsible for collecting dues, preparing transaction processes, record-keeping, and monitoring finances

Swim Instructor and Swim Coach (Durham, NC) *2014 - 2018*

- Wrote practices for team of 80 young swimmers and provided one-on-one coaching for swimmers ages 5-12
- Coordinated meet entries and organized young swimmers for swim meets
- Supervised five other coaches and ensured that goals and standards were understood by all
- Promoted and created games and fun activities during instruction
- Composed e-mails to update families about upcoming schedules and events

Captain of Piano Performance Team (Durham, NC) *2010 - 2016*

- Led and oversaw group of 2-4 members in order to improve performances and consistency
- Performed in over 50 piano concerts for schools, retirement communities, universities, and churches

Skills

- Proficient in Microsoft Office (Word, Excel, PowerPoint)
- Proficient in Java and C, Python and SAS
- Mandarin, Spanish