Dear Dr. Smith,

My interest in research started when I was 14 and my life was turned upside-down by a chronic autoimmune disease without a known cause or cure. I started reading articles on Google Scholar and became excited about uncovering the origins of disease. This prompted me to get involved in research in microbiology and molecular immunology and later chronic and acute pain. In all these experiences, I greatly enjoyed thinking about big-picture research questions, and realized that I wanted to pursue a career in research.
My interested shifted away from biomedical research at the end of my freshman year at UW, when I was first exposed to computer science. I took CSE 142 on a whim to fill up extra free time during the start of the pandemic. In 142 I realized that I was inherently drawn to the joy of algorithmic thinking.

My long-term goal is to be able to combine my interests in computer science and research to solve biological and global, social problems. As an undergraduate, I am interested in doing NLP research for two reasons. Firstly, the interplay between language structure and meaning is fascinating to me. It is something that I have enjoyed exploring through sentence diagramming and as a copy editor for a student magazine. Second, my long-term goals draw me toward NLP and ML research because of the profound potential for these areas to improve our understanding of human and biological problems.

One of the projects in your lab that I am interested is your work with scientific language models to construct biomedical knowledge graphs. I am drawn to this project because of my background in biomedical research and past experience design database searches for a systematic review on chronic pain. That being said, as an undergraduate, I would like to explore different aspects of C.S. research, to help guide my decisions about what type of research I want to pursue in graduate school, and I am excited to learn more about diverse aspects of research within NLP. I hope to work in your lab for the next 1-3 years (including this coming summer). I would like to be able to have a sustained research involvement that would help me prepare for graduate school.

By the end of fall quarter, I will have completed CSE 311 (Spring 2021, Thomas Rothvoss, 3.8), CSE 312 (in-progress), and CSE 332 (in-progress). Despite being relatively new to the computer science major, I am confident in my ability to contribute to a research team, because I am a strong student with experience teaching myself material in a research context.

Thank you for your consideration,

Nuria Alina Chandra

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RESEARCH EXPERIENCE

Undergraduate Researcher — Seattle Childrens Hospital, Seattle, WA — June 2020 → September 2021

I worked in the Pediatric Pain and Sleep Innovations Lab researching the development of acute and chronic pain after surgery and trauma with an interdisciplinary biomedical, psychological and sociocultural approach. I conducted statistical analyses to examine the association between in-hospital functional ability and subacute postsurgical outcomes. I also designed the protocol and acted as a reviewer for a systematic review of chronic pain after traumatic musculoskeletal injury.

Summer Intern — Institute for Systems Biology, Seattle, WA — June 2018 → August 2018

As a summer research intern in the Subramanian Immunology Lab, I worked to develop antibiotic inducible expression constructs for poorly understood NOD-like receptors (a class of immune receptors). My lab work included cloning experiments, PCR, and gel-electrophoresis. My research took the first step toward uncovering the role of theses NLRs in autoimmune disease and the innate immune signaling pathway.

Lab Assistant — Kutter Bacteriophage Lab, Evergreen State College — July 2016 → May 2018

As a volunteer research assistant, I worked on several group projects such as studying the coinfection of E. coli with ϕMEV11 and ϕMEV12 phages, and the effects of rumen bacteriophage on VFAs. As an independent project, I studied the isolation of E. faecalis from sewage effluent for possible oral phage therapy application in the treatment of dental caries.

EDUCATION

University of Washington
Seattle, WA
Interdisciplinary Honors Program
B.S. in Computer Science
Minor in Global Health
Expected Graduation 2024
GPA: 3.94/4.00

Capital High school
Olympia, WA
International Baccalaureate Diploma
GPA: 3.99/4.00

HONORS & AWARDS

- UW Freshman Presidents Medalist Award for highest scholastic achievement in freshman class (Jan. 2021)
- Mary Gates Research Scholar (January - June 2021)
- Scan Design Innovation in Pain Research Scholar (June 2020)
- University of Washington 2019-2020 Annual Deans List (Dec. 24th 2020)
- 1st Place in Microbiology, 4th Place overall at South Sound Regional Science and Engineering Fair (Mar. 2018)

OTHER WORK & VOLUNTEER EXPERIENCES

- *Undergraduate Research Program* - Undergraduate Research Leader (Sept. 2020 - present)
- *The Daily* - UW newspaper, journalist (Oct. 2020 - present)
- *Honors Program* - Honor's Peer Mentor (Oct. 2021 - present)
- *Together Tutors* - Volunteer tutor of Seattle Public School students during the COVID-19 pandemic (June 2020 - June 2021)
- *Voyage UW* - Editor and writer for UW student-run narrative travel magazine (Lead Copy Editor 2020-2021, Writer 2019-2020)