NURIA ALINA CHANDRA

(360) 890-0913 ⋄ nchand@cs.washington.edu

EDUCATION

B.S Computer Science - GPA 3.95 - Dec. 2023
University of Washington, Seattle, WA
Minor in Global Health, Interdisciplinary Honors, Departmental Honors

RESEARCH EXPERIENCE

Machine Learning Researcher — July 2024 - present
TrueMedia.org — *Remote*
- Led a team of 11 researchers and labellers to create and benchmark a new, multi-modal in-the-wild deepfake dataset.
- Developed and implemented ensemble deepfake detection models.
- Created and implemented a novel method for semantic analysis of audio deepfakes using LLMs.
- Improved LLM task accuracy by 20% through prompt optimization research.
- Developed a novel audio deepfake detection model with improved latency using contrastive audio-language models.
- Researched a novel method for AI-generated image detection using diffusion inversion trajectories.
- *PI: Oren Etzioni*

Mostafavi Lab — April 2022 - present
Research Assistant — *Allen School of Computer Science & Engineering*
- Developed bpAI-TAC, a SOTA base-pair resolution convolutional neural network model to predict chromatin accessibility and gene expression from DNA sequences in immune cells, improving prediction correlations by 25%.
- Interpreted bpAI-TAC using Shapley value based attributions to extract novel biological patterns learned by the model, which will be used to better understand immunological diseases.

Thomas Group — June 2022 - Jan 2023
Discrete Mathematics, Algorithms & Applied Algebraic Geometry — *University of Washington*
- Researched graphical designs, which are a type of graph approximation and can be used for graph sparsification. I developed a closed-form solution for the extremal graphical designs of all path graphs.
- Developed proofs and lemmas with another undergraduate researcher and wrote up our findings and examples so that it can be used for further research in Dr. Thomas' group.
- *PI: Rekha Thomas*

Choi Lab — Jan. 2022 - Mar. 2022
Natural Language Processing — *Allen School NLP Group*
- My project aimed to contextualize and explain the outputs of a moral reasoning model.
- Used GPT-3 prompt engineering to generate a language corpus for a defeasible inference natural language processing model for the moral reasoning model Delphi.
- *PI: Yejin Choi*

Pediatric Pain and Sleep Innovations Lab — June 2020 - Dec. 2021
Clinical Medicine — *Seattle Children's Hospital*
- Researched the development of acute and chronic pain after surgery and trauma with an interdisciplinary biomedical and psychological approach.
- Conducted statistical analyses to determine the association between in-hospital functional ability and subacute postsurgical outcomes.
- Designed the database search and acted as a reviewer for a systematic review of chronic pain after traumatic musculoskeletal injury.
- *PI: Jennifer Rabbitts*

Subramanian Immunology Lab — June 2018 - Aug. 2018
Molecular Immunology — *Institute for Systems Biology*
- I developed antibiotic inducible expression constructs for poorly understood NOD-like receptors (a class of immune receptors).
- My research took the first step toward uncovering the role of theses NLRs in autoimmune disease and the innate immune signaling pathway.
- *PI: Naeha Subramanian*

OTHER WORK

Machine Learning Teaching Assistant   Sept. 2023 - Dec. 2023
Introductory Machine Learning   *CSE 446/546*
· TA for jointly offered graduate and undergraduate ML course. Duties include Hosting office hours, grading problem sets, and answering student questions covering a wide range of machine learning topics including algorithms, computation, and statistics.

Full-Stack Software Engineer   June 2023 - Sept. 2023 (intern), January 2024 - July 2024 (full-time)
Asana   *San Francisco & New York City*
· Created a graph neural network classification model to recommend object types in Asana.
· Supported the creation and release of secure access levels: Implemented logic to show appropriate UI for "Viewer" secure access level, implemented a feature so that users could easily identify their access levels, and created a new entry point for admins to control permission levels which caused a 85% increase in use of permissions and an 12% increase in sales contacts.
· Created a feature to allow users to easily see a record of past changes, leading to a $240K ARR win.
· Worked with project managers and designers to improve the web application to be screen-reader accessible, and more easily navigable, leading to a use increase of up to 15%.

The Daily UW   2020 - 2023
Journalist   *University of Washington*
· Wrote news and science articles for the university paper. Covered topics such as artificial intelligence, medicine, disability rights, and student activism.

PUBLICATIONS & PRESENTATIONS

- **Nuria Alina Chandra**, Ryan Murtfeldt, Lin Qiu, Arnab Karmakar, Hannah Lee, Emmanuel Tanumihardja, Kevin Farhat, Sejin Paik, Changyeon Lee, Jongwook Choi, Aerin Kim, Oren Etzioni. *Deepfake-Eval-2024: A Multi-Modal In-the-Wild Benchmark of Deepfakes Circulated in 2024.* Pre-print. February 27, 2025.

- **Nuria Alina Chandra**, Yan Hu, Jason D. Buenrostro, Sara Mostafavi, Alexander Sasse. *Refining the cis-regulatory grammar learned by sequence-to-activity models by increasing model resolution.* bioRxiv 2025.01.24.634804; doi: https://doi.org/10.1101/2025.01.24.634804. Jan. 24, 2025.

- **Nuria Alina Chandra**, Alexander Sasse, Sara Mostafavi. *Base-pair resolution learning improves regional chromatin accessibility prediction in immune cells.* [Poster]. Machine Learning in Computational Biology (MLCB2023). Nov. 30, 2023.

- **Nuria Alina Chandra**, Alexander Sasse, Sara Mostafavi. *Decoding Gene Regulation of Immune Cells with Deep Learning* [Poster]. University of Washington Undergraduate Research Symposium. May 19, 2023.

- Elisabeth B. Powelson, **Nuria Alina Chandra**, Tricia Jessen-Fiddick, Chuan Zhou, Jennifer Rabbitts. *A Brief Measure Assessing Adolescents' Daily In-Hospital Function Predicts Pain and Health Outcomes at Home After Major Surgery.* Pain Medicine. Feb. 24, 2022. PMID: 35201357

- **Nuria Alina Chandra**, Elisabeth B. Powelson, Tricia Jessen-Fiddick, Jennifer Rabbitts. *Predicting Acute Post-surgical Outcomes with In-Hospital Functional Ability* [Talk]. University of Washington Undergraduate Research Symposium, May 20, 2021.

- **Nuria Alina Chandra**, Elisabeth B Powelson, Brittany N Rosenbloom, Jennifer A Rabbitts. *Prevalence and Predictors of Chronic Pain Following Traumatic Musculoskeletal Injury: A Systematic Review* [Talk]. University of Washington Undergraduate Research Program Summer Symposium, Aug. 2020.

HONORS & AWARDS

Computing Research Association Outstanding Undergrad Researcher Award Honorable Mention	Dec. 2023
Goldwater Scholar from Barry Goldwater Scholarship and Excellence in Education Foundation	Mar. 2023
Mary Gates Research Scholar Award for deep learning of immune cell genetic regulation	Dec. 2022
Washington Research Foundation Fellowship	Oct. 2022
Microsoft Endowment Merit Scholarship	Sept. 2022
Husky 100 Award: awarded to 100 undergraduate and graduate students from all UW campuses	April 2022
Mary Gates Research Scholar awarded for research on the development of acute and chronic pain	Jan. 2021
UW Freshman President's Medalist Award for highest scholastic achievement in freshman class	Dec. 2020
Scan Design Innovations in Pain Research Fellow	June 2020
University of Washington Annual Dean's List	2020, 2021, 2022, 2023

LEADERSHIP & SERVICE

Undergraduate Research Program 2020 - 2023
Undergraduate Research Leader *University of Washington*
· I conducted outreach activities with the Undergraduate Research Program to help other students, particularly from underrepresented groups, gain access to research experiences.

Voyage UW 2019 - 2022
Lead Copy Editor & Writer *University of Washington*
· Voyage UW is a narrative travel magazine that aims to share stories that foster cross-cultural understanding and appreciation. I wrote stories for Voyage and as editor, I worked with writers to tell their stories led our publication team.

Honor's Peer Mentoring Program Oct. 2021 - 2023
Senior Engagement Coordinator & Peer Mentor *Seattle, WA*
· As Senior Engagement Coordinator, I organized Honor's Program events and help connect mentors and mentees. In addition, I mentored a small group of students each quarter.

TAPDINTO-STEM June. 2022 - 2023
National Science Foundation *University of Washington Hub*
· Member of the Alliance of Students with Disabilities for Inclusion, Networking, and Transition Opportunities in STEM. I supported peers around the unique challenges of having a disability in the scientific fields.

Doorway Project Jan. 2022 - March. 2022
University District *Seattle, WA*
· Collaboratively created a zine with houseless youth on the Doorway Youth Action Board.