

# Jordan Cahoon

## *Curriculum vitae*

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### Contact

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### Education

Exp. 2024 **B.S. Computer Science**, *University of Southern California*, 3.93 GPA,  
Minor in Computational Biology & Bioinformatics

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### Research Experience

- Aug 2022 - Present **Artificial Intelligence Intern**, *The Ellison Institute for Transformative Medicine*, Los Angeles, California
- Develops deep learning models to identify breast cancer markers from cell pathology
  - Refined quality control pipeline to process thousands of images on the cloud
- Feb 2021 - Present **Undergraduate Researcher, Funded by Viterbi Fellowship**, *Chiang Research Group*, Los Angeles, California, University of Southern California, Keck School of Medicine
- Analyzed genotype imputation quality of the TOPMed Reference panel for non-European populations
  - Discovered imputation quality loss for East Asian, South-Asian, Oceanian, and Southeast Asian cohorts
  - Assessed methods to improve imputation quality for population specific variants
  - Developed webpage to visualize imputation statistics for over 200 populations from 39 publications
- June 2020 - Jan 2021 **Undergraduate Assistant**, *Tait-Wojno Lab*, Seattle, Washington, University of Washington, Department of Immunology
- Designed visualizations of specific transcriptomic responses to infection in intestinal epithelial cells
  - Conducts analysis to identify canonical markers of CD4+ t cell subsets in murine cecum and decipher t-cell diversity in the large intestine
- July - Aug 2019 **Wet Lab Research Intern**, *Baliga Lab*, Seattle, Washington, The Institute for Systems Biology
- Developed electroporation protocol that facilitates transfer of CRISPR-Cas9 complex into *C. reinhardtii*
  - Created and presented figures that nitrogen starvation increases lipid production in *C. reinhardtii*
  - Edited and provided feedback on an open-source biofuels curriculum for use in public schools

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### Work Experience

- May - Aug 2022 **Software Engineering Intern**, *Oracle Cloud Infrastructure*, Seattle, Washington
- Designed automated daily health checks for cloud billing accounts

- June 2021 - **Viterbi Student Ambassador, Content Lead**, Viterbi School of Engineering Admissions, Los Angeles, California, University of Southern California
- Present
- Led team of 12 students to produce bi-weekly virtual student panels about student life for prospective engineering students
  - Advertised panels through social media outreach, bi-weekly YouTube videos, and Spotify podcasts.

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## Publications

- 3 **Cahoon JL**, Rui X, Tang E, Simons C, Langie J, Chen M, Lo YC, Chiang CWK. Imputation around the world: Assessing imputation quality across diverse global populations. [Poster]. American Society of Human Genetics 2022 Annual Meeting. 2022 Oct 26, Los Angeles Convention Center.
- 2 Sheng X, Xia L, **Cahoon JL**, Conti DV, Haiman CA, Kachuri L, Chiang CWK. Inverted genomic regions between reference genome builds in humans impact imputation accuracy and decrease the power of association testing. *Human Genetics and Genomics Advances*. 2022 Nov 11. doi: 10.1016/j.xhgg.2022.100159.
- 1 Oyesola OO, et. al. *PGD2 and CRTH2 counteract Type 2 cytokine-elicited intestinal epithelial responses during helminth infection*. *J Exp Med*. 2021 Sep 6;218(9):e20202178. doi: 10.1084/jem.20202178.

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## Oral Presentations

- April 2022 Utilizing Reinforcement Learning to Predict Polyculture Formations, *Spring CAIS++ Project Showcase 2022*
- Dec 2021 Modeling Malaria Outbreaks Utilizing Weather Factors , *Fall CAIS++ Project Showcase 2021*
- April 2021 Predicting pandemic risk of Influenza mutations with Deep Learning , *Spring CAIS++ Project Showcase 2021*

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## Teaching Experience

- Sep - Dec 2022 Curriculum Lead for open source deep learning curriculum for undergraduates
- Jan - May 2022 Course Producer for CSCI 104, Data Structures and Objected Oriented Programming

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## Awards

Viterbi Undergraduate Merit Research Fellowship  
USC Presidential Half Tuition Scholarship  
USC Dornsife Thematic Option, Reading & Writing Honors

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## Leadership

- Aug 2022 - **Co-President**, *The Center for Artificial Intelligence's Student Branch (CAIS++)*  
Present
- Sep 2021 - May 2022 **Project Manager**, *Novus Think Tank*