

# Ben Braun

Boulder, Colorado

CONTACT INFORMATION	Department of Computer Science University of Colorado Boulder Boulder, CO 80309	<i>Email:</i> ben.braun-1@colorado.edu <i>Website:</i> ben-braun.com
EDUCATION	Ph.D. Student, Computer Science & IQ Biology University of Colorado Boulder	2024-Present
	<i>Bachelor of Science</i> , Computer Science Clemson University, Clemson, SC Minors: Biological Sciences, Genetics	2018-2022
EXPERIENCE	<i>Associate Computational Biologist</i> Dana-Farber Cancer Institute, Department of Medical Oncology, Boston, MA	2022-2024
	<ul style="list-style-type: none"><li>• Led all computational biology tasks within the lab, including the design and implementation of projects and performing advanced downstream analyses of next-generation sequencing (NGS) data.</li><li>• Applied computational methods to cancer research, focusing on <i>STAG2</i>-mutant acute myeloid leukemia (AML) in human cell line and mouse models.</li><li>• Conducted research on transposable elements, R-loop dysregulation, and cohesin malfunction, contributing to the understanding of their roles in cancer development and genomic instability. This research contributed to two publications.</li><li>• Utilized Python, Bash, and R for data analysis, machine learning, visualization, and scripting to interpret complex biological data related to specific research areas.</li><li>• Synthesized research findings and presented them to internal lab members and external collaborators, effectively communicating complex data and insights. Developed and tested hypotheses for computational analysis, advancing the research agenda.</li></ul>	
PUBLICATIONS	<i>Research Assistant</i> Clemson University, Department of Electrical Engineering, Clemson, SC	2020-2022
	<ul style="list-style-type: none"><li>• Led a project analyzing a microfluidic sensor system, characterizing and classifying individual cells using dielectric and morphological measurements and machine learning.</li><li>• Assisted in sensor assembly and operation with MATLAB, and developed data processing pipelines in Python for normalization, feature selection, and model validation.</li><li>• Presented research findings at a poster session to a diverse audience.</li></ul>	
PUBLICATIONS	<ul style="list-style-type: none"><li>• Ehrett, Carl, Matthew Keagle, Benjamin Braun, Nitya Harikumar, Jeffrey Osterberg, Neelima Dahal, and Pingshan Wang. "Supervised Machine Learning for Cell Classification in Microwave Flow Cytometers." <i>IEEE Sensors Journal</i>, 2025. <a href="https://doi.org/10.1109/JSEN.2025.3551914">https://doi.org/10.1109/JSEN.2025.3551914</a></li><li>• Dahal, Neelima, Jeffrey A. Osterberg, <b>Benjamin Braun</b>, Tom P. Caldwell, Ralu Divan, Sarah W. Harcum, and Pingshan Wang. "Spectroscopic Analysis of Candida Species, Viability, and Antifungal Drug Effects With a Microwave Flow Cytometer." <i>IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology</i> 6, no. 4 (December 2022): 566–73. <a href="https://doi.org/10.1109/JERM.2022.3201698">https://doi.org/10.1109/JERM.2022.3201698</a></li></ul>	

- Wang, Amy, Lin Han, **Benjamin Braun**, Caroline Pitton, Johann-Christoph Jann, and Zuzana Tothova. “STAG2 Loss Induces HSC Programs By Modulating Accessibility of AP-1 Bound Enhancers.” *Blood* 142, no. Supplement 1 (November 2, 2023): 1385–1385. <https://doi.org/10.1182/blood-2023-190327>
- Jann, Johann-Christoph, Christopher B. Hergott, Marisa Winkler, Yiwen Liu, **Benjamin Braun**, Anne Charles, Kevin M. Copson, et al. “Subunit-Specific Analysis of Cohesin-Mutant Myeloid Malignancies Reveals Distinct Ontogeny and Outcomes.” *Leukemia* 38, no. 9 (September 2024): 1992–2002. <https://doi.org/10.1038/s41375-024-02347-y>

## CONFERENCES

- Harvard Medical School Ludwig Center Retreat — Poster 2024
- Broad Institute Cancer Program Retreat — Talk 2023

## AWARDS, HONORS, FELLOWSHIPS

- T32 Predoctoral Program in Biological Data Science — NIH, BioFrontiers Institute 2025-2027
- Early Career Development Fellowship — School of Computing, CU Boulder 2025
- Olke C. Uhlenbeck Graduate Fellowship — BioFrontiers Institute 2024-2025
- Integrated Data Science Fellowship — BioFrontiers Institute, NSF & NRT 2024-2025
- Palmetto Fellows Scholarship — State of South Carolina 2018-2022