Ben Braun

Boulder, Colorado

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EDUCATION

Ph.D. Student, Computer Science & IQ Biology   2024-Present
University of Colorado, Boulder, Boulder, CO

Bachelor of Science, Computer Science   2018-2022
Clemson University, Clemson, SC
Minors: Biological Sciences, Genetics

COMPUTER SKILLS

Languages: Python, Bash, R, C++, HTML/CSS/JavaScript, TeX;
Software: Unix, Jupyter, VS Code, Adobe Illustrator, IGV, Zotero, Obsidian;

EXPERIENCE

Associate Computational Biologist   2022-2024
Dana-Farber Cancer Institute, Department of Medical Oncology, Boston, MA

- 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.
- Applied computational methods to cancer research, focusing on *STAG2*-mutant acute myeloid leukemia (AML) in human cell line and mouse models.
- 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.
- Utilized Python, Bash, and R for data analysis, machine learning, visualization, and scripting to interpret complex biological data related to specific research areas.
- 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.

Research Assistant   2020-2022
Clemson University, Department of Electrical Engineering, Clemson, SC

- Led a project analyzing a microfluidic sensor system, characterizing and classifying individual cells using dielectric and morphological measurements and machine learning.
- Assisted in sensor assembly and operation with MATLAB, and developed data processing pipelines in Python for normalization, feature selection, and model validation.
- Presented research findings at a poster session to a diverse audience.