Jodi Lee

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EDUCATION

2018 - 2022	**B.S. Biochemistry and Molecular Biology**	UC Santa Cruz

Dean's Honors List (2018 - present), GPA 3.99

College Scholars Program: 2018 - present

Campus Merit Scholar: 2018 - present

RESEARCH EXPERIENCE

Jul 2020 - Present	**Undergraduate Research Assistant - King Lab**	UC San Diego

NSF Biomaterials Research Experience for Undergraduates

Jacobs School of Engineering

- Single Cell Analysis of Endothelial Cells Post-Myocardial Infarction
- Selected 10 out of 550+ applicants
- Oral presentation at 2021 UC San Diego Research Symposium
- Presented Poster in 2021 Biomedical Engineering Society

2019 - Present	**Undergraduate Research Assistant - Rubin Lab**	UC Santa Cruz

Chemistry and Biochemistry

- Performed protein synthesis and purification for x-ray crystallography of oncogenic transcription factor B-Myb DNA nucleosome complex.
- Performed Molecular Dynamics to screen small molecules that destabilize Myb-MuvB complex to prevent aberrant cell proliferation.

2018 - Present	**Undergraduate Research Assistant - Jurica Lab**	UC Santa Cruz

Molecular, Cell, and Developmental Biology

- Performed computational & statistical analysis and data visualization of coordinated intron retention in aberrant splicing patterns in cancer cells.

2019 - 2020	**Undergraduate Intern - UCSC Genomics Institute Treehouse Childhood Cancer Initiative and Vaske Lab**	UC Santa Cruz

- Performed computational analysis of isoform proportion from pediatric tumour samples and identified whether up-outlier status is commonly driven by non-protein coding isoforms.

2019	**Undergraduate Research Assistant - Sgourakis Lab**	UC Santa Cruz

Chemistry and Biochemistry, University of California Santa Cruz

- Shadowed protein synthesis of Major Histocompatibility Complex class 1 and peptides to study interactions with chaperone protein TAPBPR.

HONORS & AWARDS

2021	Doug Drexler Scholarship Award	UC Santa Cruz

2020	Undergraduate Research in Science and Technology Award	UC Santa Cruz
2018 - 2022	Campus Merit Scholarship	UC Santa Cruz
2018 - 2022	KLA Tencor Urbanek Education Fund	
2019	Top Scorer for Cell and Molecular Biology Course, 280+ students	UC Santa Cruz
2020	Top Scorer for Introduction to Probability Theory, 280+ students	UC Santa Cruz

SKILLS

Computer Science

- Experience with R, Python, and Unix
- Wrote algorithms for basic search procedures using guess-propagate-recur paradigm
- Worked with symbolic expression using binary search trees, symbolic differentiation, autogradient, and clones of Pytorch

Computational Biology

- Experience with UCSC Genome Browser, ACTOR, BIOVIA Discovery Studio Visualizer, Seurat, Galaxy, BLAST, PSI-Blast, Jalview, Xena Browser, PyMol, BedTools, and RNAfold
- Created data visualization for scientific data via Matplotlib (swarm plots, sequence logo, heatmaps, volcano plots, etc.)

Mathematics and Statistics

- Applied Bayesian Statistics
- Introductory to Probability Theory
- Linear Algebra
- Discrete Mathematics
- Multivariable Calculus