

# Colton Bauml

GRADUATE STUDENT CANDIDATE

Data Intensive Biology lab of the University of California, Davis

🗨️ He/Him | ✉️ ccbauml@ucdavis.edu | ☎️ 0000-0002-5926-7792 | 📧 ccbauml | 🌐 colton-bauml

*I am deeply engaged in bioinformatics and mentorship. I excitedly wrangle data, craft software, and create dynamic mentorship opportunities.*

## Research Interests

- Bioinformatically exploring the world of big, public data in new and interesting ways.
- Combining scientific domains to create a pleasant end-user experience.
- I have overcome many obstacles to be where I am today and I am just happy to be here.

## Education

### Doctor of Philosophy

UNIVERSITY OF CALIFORNIA, DAVIS

California, USA

2020 - 2026

- Biochemistry, Molecular, Cellular, and Developmental Biology Graduate Group
- Space

### Bachelors of Arts & Science

CONCORDIA UNIVERSITY, ST. PAUL

Minnesota, USA

2014 - 2018

- Biology, BS
- Chemistry, BA
- Honors in Research
- Minor in Mathematics
- Magna Cum Laude

### Associate of Applied Science in Automotive Mechanics

HENNEPIN TECHNICAL COLLEGE

Minnesota, USA

2008 - 2010

- Academic Excellence

## Research Experience

### Graduate Research

UNIVERSITY OF CALIFORNIA, DAVIS

Davis - California

2020 - Present

- Pangenomic and novel database curation for the sourmash software ecosystem
- Case vs control multiomic investigation of public data
- Image analysis and quantification pipeline for ectodermal derivatives specified in early development
- Professors for the Future (PFTF) Fellow
- NIH Molecular Cell Biology T32 Fellowship Affiliate
- NIH Initiative for Maximizing Student Development (IMSD) Affiliate

### Junior Research Specialist

UNIVERSITY OF CALIFORNIA, DAVIS

Davis - California

2019 - 2020

- Molecular evolution of thermal tolerance in coral
- Knot theory topology of dsDNA in bacteriophage DNA packaging

### Undergraduate Research

CONCORDIA UNIVERSITY, ST. PAUL

St. Paul - Minnesota

2017 - 2019

- Novel artificial culture vessel for shell-less chick development

## **Tutor**

CONCORDIA UNIVERSITY, ST. PAUL

*St. Paul - Minnesota*

**2016 - 2018**

- In subjects of Calculus, Physics, Chemistry, and Biology

## Professional Service

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### Scholarly Literature Workshop Author and Lead instructor

DATALAB

University of California, Davis

2024 - Present

### Gene Regulatory Networks for Development Teaching Assistant

MARINE BIOLOGY LABORATORY

University of Chicago

- 2024

### Admissions Committee Member

PREP@UCD

University of California, Davis

2023 - Present

### Recruitment Colloquium Mentor

BMCDB GRADUATE GROUP

University of California, Davis

2020 - 2024

### Biology Graduate Admissions Pathways Mentor

BioGAP

University of California, Davis

2020 - 2021

### NSF GRFP Grant Writing Working Group Creator and Lead Instructor

ROGERS LAB

University of California, Davis

2020 - 2021

## Community Involvement

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### AISES Rocketry Team Founding Co-Mentor

LETTS LAB

University of California, Davis

2021 - 2023

### Grad & Post Doc UCD SACNAS Chapter Founding Board Member

COLLEGE OF BIOLOGICAL SCIENCES

University of California, Davis

2020 - 2021

### Young Scientist Program Volunteer

COLLEGE OF BIOLOGICAL SCIENCES

University of California, Davis

2019 - 2020

### 3D Printing Club Founder and President

MATH AND BIOLOGY DEPARTMENT

Concordia University, St. Paul

2017 - 2018

### Sexual Assault Victim Advocate

UNITED STATES AIR FORCE

Joint Base McGuire Dix Lakehurst

2012 - 2014

### Flight line Training Leader

UNITED STATES AIR FORCE

Joint Base McGuire Dix Lakehurst

2012 - 2014

### Physical Training Leader

UNITED STATES AIR FORCE

Joint Base McGuire Dix Lakehurst

2011 - 2014

### Leadership Mentor

UNITED STATES AIR FORCE

Sheppard Air Force Base

2010 - 2011

### Treasurer

STUDENT GOVERNMENT

Hennepin Technical College

2009 - 2010

### SkillsUSA participant

AUTOMOTIVE DEPARTMENT

Hennepin Technical College

2009 - 2010

## Funding and Grants

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## Graduate Research Fellowship Program (GRFP)

NATIONAL SCIENCE FOUNDATION

University of California, Davis

2021 - 2024

## Undergraduate Preparation Fellowship (UPF)

NATIONAL INSTITUTE OF HEALTH

University of California, Davis

2020 - 2021

## Postbaccalaureate Research Education Program (PREP)

NATIONAL INSTITUTE OF HEALTH

University of California, Davis

2019 - 2020

## Post 9/11 GI Bill

US DEPARTMENT OF VETERAN AFFAIRS

Concordia University, St. Paul

2014 - 2018

## Federal Pell Grant

US DEPARTMENT OF EDUCATION

Hennepin Technical College

2008 - 2010

# Honors and Awards

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## Professors for the Future

A COMPETITIVE, LEADERSHIP-DEVELOPMENT PROGRAM

University of California, Davis

May 2024

## College of Biological Science's Dean's Mentorship Award

IN RECOGNITION OF GRADUATE STUDENTS WHO HAVE EXCELLED IN THE MENTORSHIP OF UNDERGRADUATE STUDENTS

University of California, Davis

May 2022

## NSF Graduate Research Fellowship Program (GRFP) Award

University of California, Davis

March 2020

## NIH Undergraduate Preparation Fellowship (UPF) Award

University of California, Davis

March 2020

## NIH Postbaccalaureate Research Education Program (PREP) Award

University of California, Davis

May 2019

## Honors in Research

Concordia University, St. Paul

Decemeber 2018

## Paul W. Stor Biology Award

FOR EXCELLENCE AND DEDICATION TO UNDERGRADUATE BIOLOGICAL SCIENCES

Concordia University, St. Paul

May 2018

## Dean's List

Concordia University, St. Paul

2014 - 2018

## Airman of the Quarter

ACKNOWLEDGMENT OF EXCELLENCE WHILE SERVING IN THE UNITED STATES AIR FORCE

Joint Base McGuire Dix Lakehurst

January 2013

## Academic Excellence

Hennepin Technical College

May 2010

# Skills

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## Programming Languages

BASH, R, JAVASCRIPT, PYTHON, SQL

## Markup Languages

CSS, HTML, L<sup>A</sup>T<sub>E</sub>X, MARKDOWN, RMARKDOWN

Other Languages

SnakeMake

Version Control

Git/GitHub

Text Editors

RStudio, Vim/Neovim

Health

Self-Aid Buddy Care (SABC), CPR Trained, AED Certified

Safety

Self-Defense Coordinator, Sexual Assault Victim Advocate (SAVA)

Mechanics

FCC GROL, Certified Aircraft Mechanic, Certified Automotive Mechanic

Presentations

<p><b>The Modern, Practical Scholar Workshop Series</b></p> <p>An accessible, expanding, perpetual, and continuously updating workshop series focused on training scholars of all career stages in applied technology to streamline and improve their overall scholarship techniques</p>	<p>University of California, Davis</p> <p>2023-2025</p>
<p><b>My Successes and Failures of Grad School: How to Think like a Scientist</b></p> <p>A discussion to students about who can become a scientist</p>	<p>University of California, Davis</p> <p>June 2024</p>
<p><b>My Successes and Failures of Grad School: How to Think like a Scientist</b></p> <p>A discussion to students about who can become a scientist</p>	<p>Concordia University, St. Paul</p> <p>September 2023</p>
<p><b>Thoughts on academic writing: Emphasis on the GRFP</b></p> <p>A lecture on writing the NSF GRFP to IMSD students</p>	<p>University of California, Davis</p> <p>October 2022-24</p>
<p><b>Relocation and the meaning of life</b></p> <p>A lecture to prep on personal tips on moving across country for academia</p>	<p>University of California, Davis</p> <p>May 2022</p>
<p><b>Student Funding Panel</b></p> <p>A discussion to recruits about graduate student grants and funds</p>	<p>University of California, Davis</p> <p>February 2022</p>
<p><b>Diversity, Equity, Inclusion Committee (DEIC) Gap Year Seminar</b></p> <p>A discussion to students on the impact of taking a gap year</p>	<p>University of California, Davis</p> <p>March 2021</p>
<p><b>Diversity and Life Panel</b></p> <p>A discussion to recruits on life experience in graduate school</p>	<p>University of California, Davis</p> <p>March 2021</p>
<p><b>Fractal, Hausdorff, and the Euclidean Dimension</b></p> <p>A capstone presentation on independent mathematics research</p>	<p>Concordia University, St. Paul</p> <p>December 2018</p>
<p><b>Mandelbrot and Julia, an Imaginary Relationship</b></p> <p>A capstone presentation on independent mathematics research</p>	<p>Concordia University, St. Paul</p> <p>December 2018</p>
<p><b>Perserverance in Research</b></p> <p>A capstone presentation on independent biology research</p>	<p>Concordia University, St. Paul</p> <p>November 2018</p>
<p><b>How to count the Cantor set... You Cant?!</b></p> <p>A presentation to the mathematics club, Sigma Pi</p>	<p>Concordia University, St. Paul</p> <p>November 2018</p>

## 3D Printed Koch Snowflake Fractals

A PRESENTATION TO THE MATHEMATICS CLUB, SIGMA PI

*Concordia University, St. Paul*

*April 2018*

## Science Department Research Symposium

AN UPDATE ON CURRENT STATE OF UNDERGRADUATE RESEARCH

*Concordia University, St. Paul*

*2017, 2018*