

# Colton Bauml

GRADUATE STUDENT CANDIDATE

Data Intensive Biology lab of the University of California, Davis

🗨️ He/Him | 📞 +1 612 701 4858 | ✉️ 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

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

California, USA

2020 - Present

### Bachelors of Arts & Science

CONCORDIA UNIVERSITY, ST. PAUL

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

Minnesota, USA

2014 - 2018

### Associate of Applied Science in Automotive Mechanics

HENNEPIN TECHNICAL COLLEGE

- Academic Excellence

Minnesota, USA

2008 - 2010

## Research Experience

### Graduate Research

UNIVERSITY OF CALIFORNIA, DAVIS

- 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

Davis - California

2020 - Present

### Junior Research Specialist

UNIVERSITY OF CALIFORNIA, DAVIS

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

Davis - California

2019 - 2020

### Undergraduate Research

CONCORDIA UNIVERSITY, ST. PAUL

- Novel artificial culture vessel for shell-less chick development

St. Paul - Minnesota

2017 - 2019

### Tutor

CONCORDIA UNIVERSITY, ST. PAUL

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

St. Paul - Minnesota

2016 - 2018

## 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

December 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

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## My Successes and Failures of Grad School: How to Think like a Scientist

A DISCUSSION TO STUDENTS ABOUT WHO CAN BECOME A SCIENTIST

University of California, Davis

June 2024

## My Successes and Failures of Grad School: How to Think like a Scientist

A DISCUSSION TO STUDENTS ABOUT WHO CAN BECOME A SCIENTIST

Concordia University, St. Paul

September 2023

## Thoughts on academic writing: Emphasis on the GRFP

A LECTURE ON WRITING THE NSF GRFP TO IMSD STUDENTS

University of California, Davis

October 2022-24

## Relocation and the meaning of life

A LECTURE TO PREP ON PERSONAL TIPS ON MOVING ACROSS COUNTRY FOR ACADEMIA

University of California, Davis

May 2022

## Student Funding Panel

A DISCUSSION TO RECRUITS ABOUT GRADUATE STUDENT GRANTS AND FUNDS

University of California, Davis

February 2022

## Diversity, Equity, Inclusion Committee (DEIC) Gap Year Seminar

A DISCUSSION TO STUDENTS ON THE IMPACT OF TAKING A GAP YEAR

University of California, Davis

March 2021

## Diversity and Life Panel

A DISCUSSION TO RECRUITS ON LIFE EXPERIENCE IN GRADUATE SCHOOL

University of California, Davis

March 2021

## Fractal, Hausdorff, and the Euclidean Dimension

A CAPSTONE PRESENTATION ON INDEPENDENT MATHEMATICS RESEARCH

Concordia University, St. Paul

December 2018

## Mandelbrot and Julia, an Imaginary Relationship

A CAPSTONE PRESENTATION ON INDEPENDENT MATHEMATICS RESEARCH

Concordia University, St. Paul

December 2018

## Perserverance in Research

A CAPSTONE PRESENTATION ON INDEPENDENT BIOLOGY RESEARCH

Concordia University, St. Paul

November 2018

## How to count the Cantor set... You Cant?!

A PRESENTATION TO THE MATHEMATICS CLUB, SIGMA PI

Concordia University, St. Paul

November 2018

## 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