

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.

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

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
- NIH Initiative for Maximizing Student Development (IMSD) Affiliate
- NIH Molecular Cell Biology T32 Fellowship 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

Scholarly literature workshop Author and Lead instructor

DATA LAB

University of California, Davis

2024 - Present

Admissions Committee Member

PREP@UCD

University of California, Davis

2023 - Present

Recruitment Colloquium Mentor BMCDB GRADUATE GROUP	University of California, Davis 2020 - Present
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

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

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

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

Programming Languages

BASH, R, JAVASCRIPT, PYTHON, SQL

Markup Languages

CSS, HTML, LATEX, MARKDOWN, RMARKDOWN

Other Languages

SNAKEMAKE

Version Control

GIT

Text Editors

RSTUDIO, VIM

Health and Safety

SELF-AID BUDDY CARE (SABC), CPR TRAINED, AED CERTIFIED, SELF-DEFENSE COORDINATOR

Mechanical

FCC GROL, CERTIFIED AIRCRAFT MECHANIC, CERTIFIED AUTOMOTIVE MECHANIC

Presentations

Relocation and the meaning of life

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

Science Department Research Symposium

AN UPDATE ON CURRENT STATE OF UNDERGRADUATE RESEARCH

Concordia University, St. Paul

April 2018

Concordia University, St. Paul

2017, 2018