

Colton Bauml

GRADUATE STUDENT CANDIDATE

Data Intensive Biology lab of the University of California, Davis

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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
- 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

DATALAB

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

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| 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 2019 |
| 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, L^AT_EX, 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

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| 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

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

November 2018

Concordia University, St. Paul

April 2018

Concordia University, St. Paul

2017, 2018