

JAIR TORRES

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Technical Skills

Python	R	Biostatistics	Data Management	Graph Theory
Genomics	Bioinformatics	Microbiome Analysis	Microsoft Office	Data Visualization
RNA-Seq	Technical Writing	Science Communication	Data Visualization	DNA Extraction

Education

California State University, Stanislaus
M.Sc. Biological Sciences

August 2023 – Present
GPA: 4.0/4.0 *Suma cum laude*

California State University, Stanislaus
B.Sc. Biological Sciences

August 2019 – May 2023
GPA: 4.0/4.0 *Suma cum laude*

Research Experience

Comparative Immunogenetics of Songbirds *Master's Student*
↔ Dr. Tricia Van Laar

August 2023 – present
CSU Stanislaus

- Used long-read sequencing to assemble the genomes of three bird species for comparative genomic analyses.
- Characterized and compared the immunome, including the major histocompatibility complex (MHC) region.
- Used Python to create a syntenic gene visualizer.

Network Analysis of Disease-Gene Associations *Research Intern*
↔ Dr. Ayat Hatem

November 2022 – May 2023
CSU Stanislaus

- Applied graph theory to disease-gene association networks to identify genes underlying disease comorbidity.
- Identified the LRP2 as a gene that may underlie the comorbidity between metabolic bone disorder and hypertension.

Presentations

Comparative Genomics of Songbirds *CSU State Grad Slam*

April 2024

- Finalist in the statewide 3-minute thesis competition.

Comparative Genomic Analysis of the Finch TLR4 Gene *RSCA Celebration*

April 2024

- Presented a poster comparing the TLR4 gene between the House Finch and American Goldfinch at the CSU Stanislaus Research, Scholarship, and Creative Activity (RSCA) Celebration.

Comparative Genomics of Songbirds *Biology Colloquium Lightning Talk*

March 2024

- Presented my research on bioinformatics and avian genomics.

Applications of Graph Theory to Biological Networks *Google exploreCSR*

May 2023

- Presented my research on disease-gene association networks at the final Google exploreCSR workshop involving CSU Stanislaus, UC Merced, and Merced Junior College.

Work Experience

MEL Data Migration Assistant *Soccer Without Borders*

Spring 2024 – Present

- Automated data transformations of student data from hubs in Nicaragua, Uganda, and the United States using Python.
- Helped facilitate data migration between data management software.

Biology Lab Instructor *CSU Stanislaus*

Fall 2023 – Present

- Teach two sections (48 students) of BIOL 1020: World of Biology Lab.
- Redesigned various activities to incorporate active learning techniques.
- Teach students how to use Microsoft Excel for data analysis and presentation.

Peer Mentor Intern *CSU Stanislaus*

Fall 2023 – Present

- Provide support for instructional student assistants (ISAs).
- Lead trainings on effective tutoring and cultural competency to a cohort of 55 ISAs.
- Manage and analyze department and student data using Microsoft Excel.

Supplemental Instruction Leader *CSU Stanislaus*

Fall 2019 – Present

- Lead interactive group study sessions for groups of 2 – 24 students enrolled in the following courses:

BIOL 1010: Principles of Biology	Fall 2020–Spring 2021
BIOL 3310: Cellular and Molecular Biology	Fall 2023–Spring 2024
CHEM 1100: General Chemistry I	Fall 2022–Spring 2023
CHEM 1110: General Chemistry II	Fall 2021–Spring 2022
CHEM 3010: Organic Chemistry I	Spring 2024–Present

Peer Tutor *CSU Stanislaus*

Fall 2020 – Spring 2023

- Provided instructional support to groups of 1 – 3 students enrolled in the following courses:

BIOL 1010: Principles of Biology	BIOL 1050: General Biology I
BIOL 1150: General Biology I	BIOL 3310: Cellular and Molecular Biology
CHEM 1100: General Chemistry I	CHEM 1110: General Chemistry II
CHEM 3010: Organic Chemistry I	MATH 1070: College Algebra
MATH 1080: Trigonometry	MATH 1600: Statistics

Projects & Extracurriculars

SACNAS *Secretary*

May 2024 – present

- Helped restart the SACNAS chapter at CSU Stanislaus.

Science in Our Community *Volunteer*

March. 2023 – Present

- Helped organize and execute STEM community outreach events. Events I have lead have an asterisk (*):

Atomic Structure Model Building*
The Secret Life of Cells Microscopy
The Chemistry of Health
Darwin Day Bird Walk

Soccer Without Borders *Volunteer*

Fall 2022 – Present

- Help set up and run soccer tournaments for refugee youth.
- Work as event photographer. My photos of events help get funding for these events.

Awards

1st Place, Grad Slam

2024

- Won first place in this research competition with my three minute presentation of my Master's thesis on avian genomics.

Metzger-Geiger Award

2023

- I earned the highest GPA in my graduating class.

Biological Sciences Outstanding Achievement Award

2023

- My biology professors nominated me for this award based on my achievements as a biology student.

Funding

Labroots Travel Grant

1000 USD

- I won a travel grant for my proposal to attend the 2024 American Ornithological Society Conference.

Media

Labroots Blog

April 2024

- Title: [Celebrating the Labroots 2024 Travel Scholarship Winner](#)

CSU Stanislaus University News

May 2023

- Title: [Eight Stan State Warriors Honored as Metzger-Geiger Award Recipients](#)

Selected Course Work

Bioinformatics	Genetic Biotechnology	Immunology	Medical Microbiology	Res. and Tech. Writing (TA)
Biostatistics	Forensic DNA	Population Genetics	Parasitology	Scientific Writing and Comm.