

# JOHN HENRY CRUZ

[johnhenrycruz@utexas.edu](mailto:johnhenrycruz@utexas.edu) • 832-782-7523 • <https://johnhenrycruz.netlify.com/>

## EDUCATION

### University of Texas, College of Natural Sciences

May 2022

*Degree Candidate for Honors Bachelor of Science and Arts in Math*

*Cumulative GPA: 3.45*

### Polymathic Scholars Honors Program

January 2019 – Present

*Student in the Honors Program, Peer Mentor for Freshmen Polymaths*

- Created a field of study called Factors of World Values, to take courses to examine variations in distinctive cultures
- Study cultures transition from industrial to post-industrial societies and variety of factors influence different people
- Analyze society's views and ideologies on life, specifically looking at survival versus self-expression values
- Mentoring new students and community building through outreach with various seminars, socials, and discussions

## RESEARCH EXPERIENCE

### University of Texas at Austin Bio Data In Biology Lab

August 2019 – December 2019

*Researcher, Social Media(Instagram)*

- Time series analysis of transcriptomic data from A. burtoni transitions and house finch development to identify target genes
- Analyze large datasets on gene expression and phylogenetic relationships to attempt to characterize expression
- Run the Instagram page for the stream for science outreach to share computational biology research happening on campus

### Auburn University NSF REU in Computational Biology

May 2019 – July 2019

*Research Intern*

- Conduct research on sexual dimorphisms in response to endocrine disruptors using the model system drosophila
- Use bioinformatics tools and coding to organize and analyze data and create visualizations
- Partake in the Auburn University Bioinformatics Bootcamp, practicing scripting and using bioinformatic tools

## WORK EXPERIENCE

### Peer Learning Assistant

January 2019 - Present

*Peer Learning Assistant for BIO 311C (Introductory Biology I)*

- Facilitate learning of the material through explaining questions and explaining practice problems
- Instructed material to students in weekly office hours and have them come in and ask questions on challenging concepts
- Taught review sessions for each exam and create informative presentations on the biology topics

### First Year Interest Group Mentor

August 2019 - Present

*University of Texas Peer Mentor*

- Meet weekly with 25 freshmen and mentor them on their academic and extracurricular goals throughout the year

## ORGANIZATIONS

### Tau Kappa Epsilon Fraternity – Gamma Upsilon

January 2019 - Present

*Active Member, Cryosophylos(Treasurer), Social Media Chair (Instagram)*

- Raise money through on campus activities for our official philanthropy, St. Jude Children's Research Hospital
- Create and manage chapter budget for activities and prepare accurate monthly financial reports
- Run the Instagram page for the fraternity to spread the word of our activity in and outside the community

### Healing with Harmonies

August 2018 - Present

*Volunteer Cellist*

- Performs short concerts for nursing homes, rehabilitation centers, and hospices and different campus events
- Philanthropic goals for the community through musical fundraising

## SKILLS

### Programming

Proficiency with Python, R, CLI, Experience with Excel, Bash, C, IGV, Sharp

### Courses (Research/Lab Techniques)

Scientific Inquiry: Imaginative, Intro to Computational Biology, Intro to Probability and Statistics, Intro to Lab Experiments in Biology, Biostatistics, Computational Biology and Bioinformatics, Genetics, Intro to Programming, Multivariable Calculus

## HONORS AND AWARDS

### University of Texas University Honors

Fall 2018, Fall 2019