JOHN HENRY CRUZ

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EDUCATION

University of Texas, College of Natural Sciences   **Expected May 2022**
Degree Candidate for Bachelor of Science and Arts Honors in Computer Science
Certificates: Applied Statistical Modeling, Scientific Computation and Data Science, Evidence and Inquiry
Cumulative GPA: 3.5

Polymathic Scholars Honors Program   **January 2019 – Present**
Student in the Honors Program, Peer Mentor for Freshmen Polymaths
- Created a field of study called Words Speak Louder Than Actions, focusing on the idea of AI and Social Cognition
- Pursue Evidence and Inquiry Certificate with courses from Psychology, Computational Linguistics, and Artificial Intelligence
- Tie together concepts where AI could develop a sense of cognition and respond intelligently through sentiment analysis
- 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

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

Undergraduate Teaching Assistant   **January 2019 - Present**
Undergraduate Teaching 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

ORGANIZATIONS

Tau Kappa Epsilon Fraternity – Gamma Upsilon Chapter   **January 2019 - Present**
Active Member, Crysophylos (Treasurer), Past Social Media Chair (Instagram)
- Raise money through on campus activities for our official philanthropy, St. Jude Children's Research Hospital
- Create and manage a chapter budget for events and activities alongside prepare accurate financial documentation
- Run the Instagram page for the fraternity to spread the word of our involvement 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

SIDE PROJECTS/SKILLS

Programming: Python, R, Java, CLI, Vim
Tools: Git, Spark MLlib, Scikit-learn, Tensorflow, Keras, Horovod, NLTK, ggplot2, tidyverse, dplyr, numpy, pandas, matplotlib

Analysis of Stanford Open Policing Project
Analyzed a portion of the Stanford Open Policing Project to study associations seen between races and different police stop responses using R and different packages such as ggplot, tidyverse, and dplyr.

HONORS AND AWARDS

University of Texas University Honors   **Fall 2018, Fall 2019**