

JOHN HENRY CRUZ

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EDUCATION

The University of Texas at Austin, College of Natural Sciences

Expected May 2022

Degree Candidate for Bachelor of Science and Arts Honors in Computer Science

Certificates: Applied Statistical Modeling, 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

The University of Texas at Austin, Big Data In Biology Lab

August 2019 – December 2019

Researcher, Social Media Representative

- 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
- Organize career/scholastic sessions and group bonding events to build a sense of community and personal development

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
- Instruct material to students in weekly office hours and discussion sessions on challenging concepts
- Run review sessions with an attendance of 200+ for each exam and created informative presentations on the biology topics

ORGANIZATIONS

Tau Kappa Epsilon Fraternity – Gamma Upsilon Chapter

January 2019 - Present

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

- Coordinate philanthropy events raising thousands for St. Jude Children's Research Hospital and Meals on Wheels
- Create and manage a chapter budget for events and activities alongside prepare accurate financial documentation
- Manage Province Forums where 10+ chapters attended to develop networking skills and financial literacy

PROJECTS

LinkedIn Skill Scraping Project

June 2020

- Scraped LinkedIn job posting descriptions using BeautifulSoup and Selenium and analyzed what skills and tools were most sought out for in Data Scientist using Python and the NLTK Library

Analysis of Stanford Open Policing Project

April 2020

- 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

SKILLS

Programming: Python, R, Java, CLI, Vim

Tools: Git, Spark MLlib, Scikit-learn, Tensorflow, Keras, Horovod, NLTK, ggplot2, tidyverse, dplyr, numpy, pandas, matplotlib

Interest: Mechanical Keyboards, Cello

HONORS AND AWARDS

University of Texas University Honors

Fall 2018, Fall 2019