

# JOHN HENRY CRUZ

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## EDUCATION

### The University of Texas at Austin, College of Natural Sciences

Expected May 2022

*Bachelor of Science and Arts Honors in Computer Science*

*Certificates: Applied Statistical Modeling, Evidence and Inquiry*

*Cumulative GPA: 3.55*

### 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
- Mentor new students and community building through outreach with various seminars, socials, and discussions

## EXPERIENCE

### The University of Texas at Austin, Pennebaker Language Lab

September 2020 – Present

*Undergraduate Researcher*

- Analyze survey and Reddit data concerning COVID-19 using LIWC, MEM, and other computational linguistics tools (NLTK)
- Predict and interpret major themes and feelings during the pandemic such as Masks through statistical models and PCAs
- Developed dictionaries on different psychological dimensions and created text datasets for the new version of LIWC.

### First Year Interest Group Mentor

August 2019 - Present

*University of Texas Peer Mentor*

- Mentor 25 freshmen colleagues on their academic, career, and extracurricular goals throughout the year
- Presented various topics and assembled group bonding events to build a sense of community and personal development

### 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
- Partake in the Auburn University Bioinformatics Bootcamp, practicing scripting and using bioinformatic tools
- Use bioinformatics tools and coding to organize and analyze data and create visualizations

### 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
- Lead 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
- Design and manage a chapter budget for events and activities alongside prepare accurate financial documentation
- Organize 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

- Generated meaningful insights on 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

## ADDITIONAL

**Programming:** Python, R, Java, CLI, Vim

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

**Interest:** Mechanical Keyboards, Cello

**Work Eligibility:** Eligible to work in the U.S. with no restrictions

## HONORS AND AWARDS

University of Texas University Honors

Fall 2018, Fall 2019