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: 3.5947

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 language analysis in Psychotherapy
- Research how sentiment and phonetic analysis could be used in a psychotherapy setting to better understand a client
- Pursue Evidence and Inquiry Certificate with courses from Psychology, Computational Linguistics, and Computer Science
- Mentor new students and community building through outreach with various seminars, socials, and discussions

EXPERIENCE

Northwestern University, Creative Cognition Lab **June 2021 – July 2021**
Summer Research Opportunity Program (SROP) Research Intern
- Developed algorithmic methods to automate the scoring process of AUT Metrics to tackle subjectivity with human scoring
- Coded these methods using Python, semantic spaces, and clustering methods to calculate novelty, originality, and flexibility
- Presented findings and methods at the culminating Northwestern SROP Research Symposium

The University of Texas at Austin, Pennebaker Language Lab **September 2020 – Present**
Undergraduate Researcher
- Analyzed Zoom Transcripts for relationships between talking speed and hesitation with different psychological dimensions
- Studied survey and Reddit data concerning COVID-19 using LIWC, MEM, and other computational linguistics tools (NLTK)
- Predicted 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.

Auburn University NSF REU in Computational Biology **May 2019 – July 2019**
Research Intern
- Conducted research on sexual dimorphisms in response to endocrine disruptors using the model system drosophila
- Partook in the Auburn University Bioinformatics Bootcamp, practicing scripting and using bioinformatic tools
- Utilized bioinformatics tools and coding to organize and analyze data and create visualizations

Undergraduate Teaching Assistant **January 2019 – May 2020**
Undergraduate Teaching Assistant for Introductory Biology I
- Facilitated learning of the material through explaining questions and explaining practice problems
- Instructed material to students in weekly office hours and discussion sessions on challenging concepts
- Led 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, Crysophylos (Treasurer), Past Social Media Chair (Instagram)
- Coordinated philanthropy events raising thousands for St. Jude Children's Research Hospital and Meals on Wheels
- Designed and manage a chapter budget for events and activities alongside prepare accurate financial documentation
- Organized 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 Beautiful Soup 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, Beautiful Soup
Interest: Mechanical Keyboards, Cello, Linear Algebra, Statistics
Work Eligibility: Eligible to work in the U.S. with no restrictions

HONORS AND AWARDS

University of Texas University Honors **Fall 2018, Fall 2019, Fall 2020, Spring 2021**