

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

The University of Texas at Austin, Jessy Li Computational Linguistics Lab

August 2021 – Present

Undergraduate Researcher

- Developed Amazon Mechanical Turk using JavaScript and HTML for annotations of emotions in COVID-19 data
- Scraped and Analyzed COVID-19 data from support subreddits and 16 cities subreddits for emotional triggers

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)
- 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

ORGANIZATIONS

Tau Kappa Epsilon Fraternity – Gamma Upsilon Chapter

January 2019 - Present

Active Member, Past Cryosophylos (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

GateVis: Agnostic Service Mesh and Visibility Tracing

May 2021

- Designed a service mesh architecture that tracks sources of requests using an additional "gateway" proxy to log metric data
- Deployed EC2 Instances in AWS and wrote Iptables rules to reroute requests between proxies where data was stored
- Developed a Metrics Visualizer web application to provide a GUI interface where requests information could be viewed

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

ADDITIONAL

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

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

Interest: Mechanical Keyboards, Cello, Machine Learning, Psychotherapy, 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