

ZELMA GARZA



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EDUCATION

The University of Texas at Austin

May 2021

Computer Science, Bachelor of Science and Arts

GPA: 3.59

Certificates: Innovation, Creativity, and Entrepreneurship

Relevant Coursework: Data Structures, Software Engineering, Computer Architecture, Operating Systems/Concurrency, Discrete Math, Linear Algebra/Matrices

Skills: Java, JavaScript, C++, Python, PHP, x86 Assembly

Languages: Spanish

WORK EXPERIENCE

Facebook – *Software Engineer Intern*

May – Aug 2020

- Built a unified COVID-19 information center with resources and tips for business owners using **PHP**
- Created a flow for business owners to create an offer and share it on FBLite with **Native Templates**
- Programmed an editable page name, which increased monthly active businesses by 51.80K

PROJECTS

News and Tweets Search Engine

- Built a search engine with filtering and sorting of news, tweets, and countries using **React**
- Displayed trending tweet topics for top 100 countries along with the associated news
- Tested the site's reusable components using **Mocha JS** and **Python**
- Created data visualizations of the common news topics and tweets using **D3 JS**

Huffman Compression

- Built a program to compress and decompress files in **Java**
- Developed an algorithm to make the bit encoding of high frequency characters shorter
- Implemented a priority queue with weighted nodes to make a binary tree to use for encoding
- Decompressed files by recreating the tree from the header in compressed files and walking it

Pint Operating System

- Implemented interrupt-friendly locks and other synchronization techniques using semaphores in **C++**
- Integrated virtual memory system through mapping with page tables
- Developed a file system using nodes to store the number of links, type, size, and data block pointers
- Implemented read and write with an offset from a file
- Programmed the exit and write system calls

LEADERSHIP EXPERIENCE

Texas 4000 for Cancer – *Travel Committee Member, Rider*

Oct 2018 – Aug 2019

- Biked from Austin, TX to Anchorage, AK as part of the world's longest annual charity bike ride
- Fundraised over \$4,600 in support of cancer research and support services
- Secured daily food donations totaling over \$1,000 to support the team during the 70-day ride

UT Sanger Learning Center – *Data Structures and Calculus Tutor*

Aug 2018 – May 2020

- Clarified difficult Data Structures and Calculus questions in one-on-one appointments with students
- Mentored over 500 students in Calculus and Data structures