JEFFREY **ZHU**

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EDUCATION

University of Texas at Austin – Austin, Texas
Expected 2019

- B.S. Computer Science
- GPA: 3.96

Relevant Coursework:

Data Structures	Discrete Math	Computer Graphics
Linear Algebra/Matrices	Probability and Statistics	Algorithms and Complexity
Computer Architecture	Operating Systems	

FEATURED PROJECTS

Huffman File Compression (Java)

- A lossless compression algorithm that features two compression/decompression methods for large text files, averaging 65% compression for files over 10MB.
- The basic algorithm replaces the characters in the original file with a shorter bitstring code that is generated based on the frequency characters occurred in the original file.
- The user can also choose whether to use an array or a binary tree as the decompression key for the compressed file.

Evil Hangman (Java)

- A variation of the original Hangman game where the computer "tricks" the player by only selecting a word once the player has exhausted all other options in the dictionary.
- The computer uses a TreeMap as a dictionary and eliminates words for every additional character that the player enters, eliminating based on frequency of character patterns throughout words in the dictionary.

Markov Text Generator (Python)

- A program that will train itself on a given plain text, file, or URL data and generate new text that tries to mimic the style of the input text.
- The program separates the text into tokens of a given size and utilizes an underlying Markov Chain to generate output based on frequency of appearance within the input.

3D Tic-Tac-Toe and AI (Java)

- A graphical 3D Tic-Tac-Toe game where players have the option to play against another player through a local network or an AI.
- The AI uses a series of ArrayLists and a breadth-first tile scoring algorithm that examines the potential moves of both players to determine the next best move.

SKILLS

Java **–** Python **–** C **–** HTML & CSS

INTERESTS

Guitar **–** Bass **–** Music Production **–** Gaming