

# KAILIN (KELLIE) GUI

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## EDUCATION: University of Washington

Expected June 2022

BS: Computer Science

GPA: 3.88

Dean's List: 3 quarters

Relevant coursework: Computer Programming, Foundations of Computing, The Hardware/Software Interface, System and Software Tools

## LANGUAGES: Proficient: Java, C#

Working Knowledge: JavaScript, HTML, R

## PROJECTS: Huffman Zip [Java]

June 2019

- Built a program that can compress and decompress text files formatting in UTF-8
- Applied Huffman coding scheme, prefix code and binary tree
- Reduced memory by eliminating the Huffman code file from the compression output and it is optimal for a symbol-by-symbol coding

## Guessing Animals [Java]

May 2019

- Implemented a yes/no guessing game which the computer asks questions to guess an animal name that the user thinks and the user only replies yes/no
- Develop a binary tree that builds its answer nodes when it fails to guess the correct answer and builds the corresponding question node based on user input
- Applied a large data file of approximately 10,000 animal names and corresponding questions. The game can be played in <http://animalgame.com/>

## Guitar Monitor [Java]

April 2019

- Developed a program to stimulate 37 guitar strings that can be played on keyboard
- Modeled a guitar string by using Karplus-Strong algorithm which simulates the vibration of plucking a guitar string by maintaining a ring buffer of the N samples and used StdAudio and StdDraw libraries to play .wav files
- Set an example for stimulating other string instruments

## LEADERSHIP & EXTRACURRICULAR ACTIVITIES:

### Seagull drama Assistant Director

May 2019 – Current

- Manage rewriting script and in charge of directing and rehearsal
- Collaborate with set, sound and costume designers to produce stage design
- Contribute in leading the acting and production team

### UW Academics Human Resources Student Assistant

February 2019 – Current

- Conduct data entries and maintain various systems in Electronic System Management
- Interact with faculty and staff to resolve administrative problems

### International Student Mentorship Program

September 2018 – Current

- Participate in an organization of mostly international students that aims to prepare them for life in the United States
- Collaborate with other members to develop self-constructed workshops on social networking skills, self-care, career development
- Planned and hosted the Global Leadership Appreciation Banquet for international community in UW