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Megan Le

EDUCATION

The University of Texas at Austin - Austin, TX

Class of 2022

B.S. in Computer Science and Mathematics (double major) | **GPA: 4.0**

COURSEWORK

Data Structures, Compilers, Operating Systems, Computer Architecture, Discrete Math, Probability I, Computational Materials, Techniques of Research, Accelerated Calculus: Sequences, Series, and Multivariable Calculus

PROJECTS

Hex AI - Made in Python

- AI that plays the abstract strategy game hex
- uses the Monte Carlo tree search algorithm to select moves
- can use the minimax algorithm for move selection on smaller hex boards

CipherSeek - Made in C++

- application that encrypts and decrypts text using different ciphers
- includes the Hill, Vigenere, keyword, Atbash, and affine ciphers
- can brute-force decrypt ciphertext, determining success with the chi-squared test

EXPERIENCE

UT Sanger Learning Center - Tutor

August 2019 - present

- provide one-on-one tutoring for students taking Data Structures, Discrete Math, Calculus, and Probability
- tutor students taking calculus in the Drop-in Tutoring Center

Freshman Research Initiative Summer Research Fellowship

June 2019 - August 2019

- worked on software for haptic device that simulates forces of atomic configurations
- edited the Atomistic Machine-learning Package to implement faster fingerprint database management
- added the Morse potential for potential energy surface calculation, mouse control of the atoms, and the ability to save and load atomic configurations
- restructured existing code to improve encapsulation and organization

PRESENTATIONS

“Modifying the Atomistic Machine-learning Package for Real-time Atomic Simulations.” Poster presentation at the Texas Advanced Computing Center (TACC) Symposium for Texas Researchers. September 26th, 2019; Austin, TX.

SKILLS

Proficient: C, Java, C++, Python

Learning: Javascript, HTML

ACTIVITIES

Coding in the Classroom Mentor

Engineering Chamber Orchestra