

# EDWARD HU

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<https://github.com/BDHU>

## EDUCATION

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**University of Texas at Austin**  
B.S. in Computer Science & Mathematics  
GPA: 3.72

*December 2016 - May 2020*

## EXPERIENCE

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**University of Texas at Austin**  
*Student Researcher*

August 2016 - Present  
*Austin, TX*

- Used OpenCV to detect the defects generated during 3D printing and halt the process if necessary.
- Construct artificially neural networks with multiple layers.
- Use gradient descent and genetic algorithms to optimize the performance of the ANN.
- Utilized numpy and matplotlib for the optimization and graphing tasks.
- Use Python to modify the Gcode file used to guide the 3D printing process.
- Use optimization methods to find the optimal solution to cut 3D printed object to reduce support structure required.

## TECHNICAL EXPERIENCES

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### Projects

- *Minesweeper Optimization*: Used NEAT framework to implement ANN to improve the efficiency of minesweepers.
- *Character Recognizer*: Implement a two-layer neural network to improve its accuracy on predicting the hand-written digits.
- *File Compressor*: Used huffman coding method to compress a file, reduce the size of the file, and restore the compressed data.
- *Browser*: A browser for macOS that has basic function to browse webpages.

### Extra curriculum

- Robotics Club: Compete in Region 5

### Curriculum

- Data Structure, Intro to Computer Architecture, Intro to Computer Systems, Computational Intelligence in game AI.

## TECHNICAL STRENGTHS

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### Computer Languages

Java, C/C++, Python, Swift, L<sup>A</sup>T<sub>E</sub>X, Matlab

### Tools

Linux, Git, Vim, GCC, Docker, IntelliJ, Xcode

### Languages

Chinese, English