SHANE BOLDING

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EDUCATION

B.S. in Computer Engineering
University of West Florida: GPA - 3.22
Aug. 2015 – May 2020

B.S. in Electrical Engineering
University of West Florida: GPA - 3.43
Aug. 2015 – May 2020

PROJECTS

Lego Collecting Robot
C#

Date: Oct. 2019 - Mar. 2020 Location: UWF

· Entered the Southeast IEEE PI Day Competition.
· Built a robot, including the power system, to pick up the most Legos in a specific order in under 3 minutes.
· Accomplished 13 blocks stacked in 3 minutes.
· Unfortunately, the contest was cancelled due to Covid.

Personal Handheld Game System
Python/Solidworks

Date: July 6 - 9, 2020 Location: My Home

· Utilized a Raspberry Pi Zero and a 2.2 inch screen to create the system.
· Soldered a safe battery system to ensure fast charging and a battery life of approximately 6 hours.

Home Security Camera
Python/Solidworks

Date: July 11 Location: My Home

· Designed a self-contained power supply system for it.
· Utilized Python and a machine learning algorithm library to watch my doorway and send me a picture through email when it detected a human at the door.
· Designed and printed a black casing to hold the raspberry pi and camera.

Sudoku GUI w/ Backtracking Solution
Python

Date: July 10, 2020 Location: My Home

· Created an interactive GUI that allows you to play sudoku and solve it using the backtracking algorithm when you hit the space bar.
· Constructed the backtracking algorithm using recursive logic.

LANGUAGES

C	●●●●●
C++	●●●●●
Python	●●●○○
Java	●●●○○
Assembly	●●●○○

EXPERIENCE

Tutor
University of West Florida

Date: Aug. 2019 - May 2020 Location: Pensacola, Fl

· Help countless students understand Computer Science, Computer Engineering, and Electrical Engineering that they may not have understood the first time.
· Worked more than the 10 hours I was paid a week to ensure the students that came to me for help got the help they needed.

MORE PROJECTS

Fish Computer Recognition
MatLab

Date: Summer 2019 Location: UWF

· Assembled an AI that could recognize between 20 fish with 97 percent accuracy.
· Crafted an AI that determined the learned itself to determine the best features to focus when looking at a fish.

Programs to Demonstrate Multi-Threading
C/C++

Date: Spring 2019 Location: UWF

· Utilized threading to do computationally complex problems in a fraction of the time using a single thread program.
· Learned about protection of race conditions when threading using a data structure called a Semaphore.
· Constructed throughout multiple projects the understanding of Multi-Threading.

Skills Page

Electronics

- Thru Hole Soldering
- SMT Soldering
- Reading and drafting electrical schematics
- Advanced circuit design
- Condensing and creating advanced circuit logic
- Utilizing microprocessors to communicate with one another
- Reading sensors into microprocessors to determine actions for a closed loop system.
- Built/likes building robots
- Understanding of stepper motors, brushless motors, dc motors and how to control them via a motor controller or custom circuit
- Using Oscilloscopes, Voltmeters, Amperemeter, Spectrum Analyzer, EEPROM Flashers, etc.

Coding

- Emulating hardware to software
- Programing 3D graphics engines utilizing Calculus/C++
- Simulating advance math/probability problems using software
- Designing websites using HTML/Python
- AI/Pattern Recognition to identify and categorize different objects
- Handling vast amounts of data and utilizing it to calculate statistics
- Creating HTTPS Server and Client
- Utilizing the full strength of a multicore processor by multi-threading
- Game Design (hobby)
- Building search engine. Made a program that went to a website like Texas Instruments and searched a bill of materials 1000+ parts long (personal proj.)

3D Modeling

- Designing 3D models from schematics or measurements I took using Calipers and micrometers
- Simulating stress tests on 3D models in SolidWorks
- Drafting drawing in detail
- Assembling 3D modeling with accurate degrees of rotation
- Creating animation of assemblies moving in SolidWorks
- Create exploded views of assemblies
- Utilize PhotoView 360 in SolidWorks to create a realistic rendering of model