Brandon Aguilar

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Education

University of Nevada, Las Vegas Aug. 2019 – Present
Bachelor of Computer Science *Expected Graduation: Dec 2022*
GPA: 3.86
Relevant Coursework: Data Structures and Algorithms, Machine Learning, Operating Systems
Dean's List: Aug. 2019 – Present

Projects

Reddit Webscraper | *Python, Reddit API (PRAW), Windows API* March 2021 – April 2021
- Extracted data from marketplace subreddits using the Reddit API and PRAW to identify significant deals
- Devised a notification system using Windows API to generate Toasts of relevant deals
- Incorporated a file generation system with HTML that displayed results to the user
- Implemented a string parser to identify products and respective prices
- Logged history to track price changes for specified items

Counter-Strike: ASCII | *C++* Oct. 2020 – Dec. 2020
- Developed a Counter-Strike inspired terminal game using C++ and the Ncurses library
- Implemented AI utilizing heuristic decision making responsive to allies and enemies to provide dynamic gameplay
- Incorporated A* pathfinding with randomized pathing for unique AI behaviors
- Established map generation based on file parsing to allow for custom made maps
- Constructed a ballistics engine using a grid system to establish game physics

Xv6 Operating System | *C* Aug. 2021 – Dec. 2021
- Enhanced the existing Xv6 OS to expand functionality and apply modern OS philosophies
- Overhauled the Round Robin based scheduling to Priority Scheduling which accelerated performance
- Boosted performance by implementing Parallel Processing methods with the Pthreads library
- Upgraded OS utility by adding standard syscalls

Card Counting Simulator | *C++* March 2021
- Established a base card game system with OOP ideals utilizing the C++ Standard Library
- Expanded the foundation to include an interactive Blackjack simulation
- Demonstrated the practicality of card counting by simulating its proficient results

Extracurricular

ICPC 2021 SoCal Regional March 2021
- United as a team of 3 students to compete against other Southern California universities in a programming event
- Directed the team by assigning tasks based on programming strengths
- Placed 1st against UNLV competitors

UNLV ACM | *Member* Jan. 2021 – Aug. 2021
- Mentored newer members by expanding their coding knowledge and practicing interview preparation
- Collaborated in groups to practice development skills
- Participated in coding competitions to strengthen programming methods

Technical Skills

Languages: (Proficient): C++ (Familiar) Python, C, Java, HTML/CSS
Tools: (Proficient) VS Code, Linux (Familiar) Git, Virtual Box