DASHIELL BUDD

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EDUCATION:

VIRGINIA TECH, College of Engineering   Blacksburg, VA
Bachelor of Science – Computer Science   Expected May 2025
Minor: Math
GPA: 3.90

PROJECTS:

CHAT BOT   2023
- Created a chat bot using the Discord.py library to interface with the Discord API
- Managed and distributed workload between my peer and I as well as working collaboratively on certain parts using Replit.
- Used LangChain's python library to integrate Open AI's LLM technology, allowing the bot to respond to messages, give advice, tell jokes, and even analyze previous messages in the text channel to imitate how one of the other users would respond.

FLAPPY BIRD CLONE AND NEURAL NETWORK   2023
- Created a visually simplified clone of the popular game Flappy Bird using C# to write scripts for Unity.
- Constructed a Neural Network from scratch in C# using Object-Oriented Programming in order control the movements of the bird autonomously.
- Created a system to train the network using a fitness evaluation function that determines the best network in a population which then influences the next population of networks.
- The best network trained was able to navigate through 6,216 pipe openings without collision.

BREAD BOARD SYSTEMS   2022
- Fabricated a series of small projects that utilized Breadboards, Arduinos and small electrical components.
- Designed, wired and programmed in C++ a model weather alert system that could sense climate conditions such as atmospheric pressure and signal, incoming or current weather events.

EXPERIENCE:

BOLT   September 2023 – Present
VIRGINIA TECH
- Design team that builds an electric motorcycle to compete in the AHRMA eMotoRacing series with emphasis on performance and innovation.
- 2 times National Historic Cup Roadrace Champions
- Leading team responsible for creating a webpage to display the bikes position on the race track and visualize data gathered during the race such as speed, acceleration, motor temperature, etc.
    - Utilizing HTML, CSS, and JavaScript
    - Managing project members and maintaining the project notebook which includes records, resources, goals, and milestones.
    - Providing guidance and assistance for new project members as well as presenting weekly progress reports at large team meetings.
    - Personally contributing aspects of the project such as live updates using WebSocket and web page design and styling

SKILLS:

- GitHub, Replit, Unity, Python, Java, C#, C, HTML, CSS, and JavaScript
- Teamwork and communication
- Data structures and algorithms
- Electrical wiring and controller programming
- Neural Networks