Categories of projects:
I would categorize what I make as software, code, cybersecurity projects, mechanical components, and design.

Descriptions of my projects:

Keylogger Software (Github): The goal of this project was to create a keylogger that would accurately track the keystrokes that a user makes on their computer, whether that be searching for something on the internet or typing in their password. The software then adds those findings to a .txt file and sends that file to the developer via email.

Unreal Engine 4 Mario Game (Github): The objective of this project was to create a game in Unreal Engine 4 that resembled the original Mario 64 game.

Agar.io/Vanis.io UI/UX Remake (Github): The goal of this project was to remake the popular online game Agar.io or Vanis.io. This project is still a work in progress, the UI and UX are fully developed but the physics of the game is not yet complete.

Wireshark and Google Maps Data Tracking (Github): The main objective of this project was to track the origin and destination of data that is present on a network.

Machine Learning – Distinguishing between cats and dogs using TensorFlow (Github): The goal of this project was to use TensorFlow to create a script that could distinguish between cats and dogs as well as create a resilient AI system that could be trained to increase the accuracy of distinguishing between cats and dogs. As someone who is interested in robotics, machine learning, and AI this project is important to me because it was my first exploratory project into those topics.

Terminal-based encryption software (Github): The goal of this project was to create terminal-based software that would be able to encrypt an image so that no sensitive information is available. The software should also have the capability to decrypt the image by using a key that is saved to a .txt file.

FIRST Robotics Competition (FRC) Code (Github): This project outlines my contributions to the 2020 FRC season robot code for team 5667.

FRC Mechanical Design/CNC: More information on this project can be found in the document titled: FIRST Robotics Pictures and Descriptions

How I make my projects:

I use online resources and tutorials to get a feel of what the topic I am learning about is and then I change the scenario and make my own version of projects. I do this because oftentimes coming up with projects on my own is hard so I get inspiration from tutorials, videos, and cool projects and then try to do it on my own with a twist.

Why I make my projects:

My passion for computer science runs deeper than “enjoying to code.” The world of computers is one that I will never get tired of learning about. Computer science opens many doors for me and my goal as I move forward in life is to use my skills to improve the world around me. As I have explored the ways that Computer Science affects our world today from robotics and automation to Cybersecurity advancements, I can see my place in this world of innovation. My excitement about computer science only increases at the prospect of studying at one of the world’s premier institutions and learning and growing with the mentorship and resources that your institution provides. In this maker portfolio, I will share with you some of my favorite personal projects from programming robots to projects that explore ethical hacking.

The most meaningful thing I’ve made:

I think the most meaningful thing I've made has to be the Mario Game in Unreal Engine 4 because I grew up playing this game and it's my childhood favorite. Ever since I was born the one game that I have always played is Mario games and recreating this in Unreal Engine gave me a certain satisfaction when I was able to create such a great thing by myself. I faced many challenges while making this game, the main being defining character and game element interaction with collision blocks.