I designed an IoT Device that is made for security systems, that uses an open-source software like Cv2 or could even use a more accurate hand crafted facial recognition software. My IoT Device uses a combination of machine learning onboard the device to identify people that should not be in a specific room. The machine learning engineers will have to make the model to be able to detect and compare a person to a list of faces and train a model that is comprehensive enough that the model is able to pick up on people’s faces. With, there is no cloud computing or edge computing on the device. The Device uses an on-board M.2 NVME Tensor processing unit to speed up the machine learning model. There will be very limited network engineering that is needed to be done because, I went with a 10gb ethernet connection, as I wanted the device to be hard wired to the machine that will be receiving all of the data. The data is also being streamed live, which is also another reason why I wanted to have 10gb ethernet which will elevate the most bottle necks as possible. The network will not rely on wireless internet, which means the system is less susceptible to being hacked, and the MQTT packaging and transport means that we will have the highest level of security possible. As for the power source. I went with a USB-C cable, as if maintenance is required on the machine, I did not want the parts to cost too much.  The Desired user experience is protected or monitor secure information. This device would be set up in low or moderate traffic areas, where protecting highly sensitive information is required. There would be a small to medium network of these devices, that allows the security team to flip through cameras, and see the activity. The other goal would be to provide an interface that allows for a 5-10 millisecond response times in which the security team gets a notice when someone who is not allowed to be in the room walks in. With, it would depend on how far away the security office is from the cameras and how fast the TPU is able to process the images.