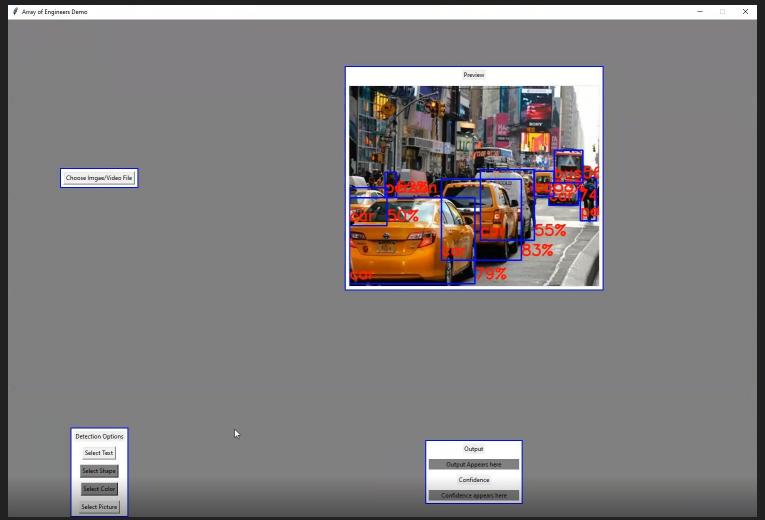
Project

- Used Neural Network to identify and verify VGA input
- Developed with python, Tensorflow models, and Keras models
- Compatible with Xilinx's PetaLinux and run on embedded ARM processor
- Implemented Text and Object detection
- Built Gui
- Uses CV2 for image processing
- Uses Pillow for file browsing
- Video feed added but not implemented



Text Detection and Object Detection

- Text Detection uses Keras-OCR model
- Works on English Language
- Correctly detects text and outputs it
- Object detection uses Tensorflow hub model
- Has label file with roughly 100 objects
- Uses Pandas and Matplotlib for output file with detections
- Displays top 3 objects detected with confidences\
- Correctly detects and displays other objects on output image and outputs them with their confidences

Conclusion

- Project set-up for future students or AoE employees to continue work
- Needs detections implemented on video feed
- Needs checks for detections
- Needs adjustable window capture
- Could use more GUI development
- Other goals achieved
    - AoE did not know if this was possible but with more development it could be a good asset to their company