Slide 1:

Hi, my name is Tiffany Parise. My project analyzes video footage of cars parking in a handicap parking space to determine whether these cars have the required handicap parking placard displayed in the windshield.

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Slide 2:

If you’re unfamiliar with a handicap parking placard, this is what it looks like. It’s essentially a pass issued to individuals with disabilities that limit their mobility, such as using a cane or having respiratory issues. If these individuals place their placard on their car windshield, they can park in reserved handicap parking spaces located close to buildings, which means they won’t have to walk across a big parking lot.

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Slide 3:

My grandmother was issued a handicap parking placard after she had a surgery that limited her mobility. She has difficulty walking and often needs to use a wheelchair. Unfortunately, my grandmother has found that the handicap parking spaces she needs are sometimes illegally filled by cars that do not have handicap parking placards. This forces my grandmother to park far away and spend several minutes walking from the parking lot to a building.

To help individuals like my grandmother, police officers have increased their personal monitoring of handicap parking spaces to prevent their illegal use. However, these methods are inefficient and inconsistent because there are just too many handicap parking spaces for police officers to be able to monitor all of them at all times. The monitoring of handicap parking spaces could be made more efficient and more reliable if computer programs were able to replace or supplement police officers in identifying whether a car parked in a handicap parking space displays the required handicap parking placard.

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Slide 4:

Therefore, I propose to create a program that uses the “You Only Look Once” (YOLO) object detection system to visually identify handicap parking placards in video footage of cars parking in a handicap parking space.