

**ECE Capstone program
Spring 2018
Project Abstract & Info**

Please provide the following information to be shared with on capstone information exchange platform:

1. Project number: 1

2. Project title (as will appear on the poster): Meter Parking Tracker

3. Team members: Rashika Agrawal, Viraj Patel

4. Adviser(s) name(s): Maria Striki

5. Up to 5 keywords that will help to classify the project scope:

- Object Recognition
- TensorFlow
- Neural Network
- Metered Parking Assistance
- Parking Location Tracker

6. Project abstract (up to 250 words) to be shared with judges:

While parking in metered parking spaces, people tend to forget:

- Where they parked the car
- When they parked the car
- How much time is left in the meter

Often people get parking tickets not due to their intention of parking illegally without paying, but due to lack of necessary tracking information. Therefore, there needs to be a better way to track the location, and time of the parked car in a metered parking space.

Our solution uses a Raspberry Pi with attached camera module and a GPS module placed in the car to track the location and the time remaining on the meter for the parked car. In addition to this, we will also build a neural network that will be implemented using TensorFlow, which will be trained to recognize labeled cop cars and uniformed police officers.

Once the car has been parked, the user will be required to send a text message to a specific number. The text message from the user will include the time that the car has been parked for. As soon as the message is received, time and location coordinates of the car will be recorded. When the time is close to being up, the user will be notified using a text messaging service about the time remaining on the meter. The user can also query about the time and location of the parked car using the same text messaging service. Once the time is up, user will be notified of any cop cars or police officers within the camera's field of vision.