# SC203-APCS17-PersonalEval-Midterm

## LICENSE PLATE DETECTION

+*Objective:*

- Improving the self-awareness of citizens about traffic problems by making fines on them.

- Solving car theft problems with camera set up along the roads.

+Dataset: 400 images of license plates with different angles and resolution.

+*Methods:*

- Find plates -> greyscale -> detect characters

- The accuracy for raw data is high, but for self-collecting data is low.

+*Problems:*

- Only works with state photos.

- Cannot detect blur, inclined, light-overexposed, light-underexposed images.

+*Improve:*

- By using OCR Tesseract.

- Processing on images.

- Making it automatically.

## MUSIC MOOD CLASSIFICATION

+*Objective:*

- Suggest a similar song base on the mood.

- Apply to the shuffle function.

-Break the objective into small objectives.

+Dataset: Million Song Dataset (The Echo Nest)  included 1200 English songs, 2 Mood (labeled as happy and sad).

+*Methods:*

- Use both audio features and lyrics to measure.

Detect by lyrics:

- Try manual (lexicon-based)

- Use Deep learning

Detect by audio:

- MFCC features

+*Future works:*

- Combine both audio features and lyrics

- Trying Lexicon based model in NLP

- Apply Treebank to RNTN

- Apply adjective annotation dataset

+*Mark:*

- Practical idea for music lovers.

# PHOTO STYLE TRANSFER

+*Objective:*

- Evaluation and improve the images to beautiful artwork

- Synchronization the images

+*Dataset:*

- Photos in different categories (Animals, Anime, Games,…)

+*Methods:*

- Neural style.

- Higher iterations give better result.

- Some style (content-weight-blend, pooling, preserve colors, style-layer-weight-exp,…)

+*Mark:*

- I like this idea since everyone now can become an unprofessional photographer, they can easily create their masterpiece.