

Data

The description of your data

Introduction to the data

The "測速執法設置點" dataset provides detailed information about speed enforcement locations across Taiwan. It covers speed enforcement zones, helping authorities monitor traffic violations and improve road safety. This data is essential for public use, allowing drivers to stay aware of enforcement zones and adjust their driving habits accordingly.

Where is the data from

Source: Taiwan Government Open Data Platform

What do the columns and tables mean

Table 1: Enforcement Zones

- Region name: the city and the region where the speed camera located
- Address: the exact address in road name and door number of the speed camera
- Longitude: the longitude of the speed camera
- Latitude: the latitude of the speed camera

Table 2: Speed Limits

- Address: the exact address in road name and door number of the speed camera, foreign key to identify the speed camera.
- Direct: the directions of the speed camera
- Limit: Maximum allowable speed (in km/h)

Table 3: Update Records

- ID: Unique identifier for the update
- Address: Foreign key to identify the updated enforcement zone
- Date of Update: Timestamp of the change
- Changes Made: Description of the changes

Table 4: User Feedback

- User ID: Unique identifier of the user providing feedback
- Address: Foreign key to identify the updated enforcement zone
- Feedback Type: Type of feedback (e.g., issue report, suggestion)

Other information about your data (e.g. will it be updated in the future?)

Frequency of Updates:

The dataset is updated periodically, especially when new enforcement locations are added or existing zones are modified. Typically, updates occur quarterly or as needed by local authorities.

Legal Considerations:

This dataset promotes compliance with traffic regulations and serves as an important tool for road safety. It adheres to public data-sharing regulations in Taiwan, making it fully accessible and legally available for public use.

The source of your data

Dataset Name: 測速執法設置點 (Speed Enforcement Locations)

Source: Taiwan Government Open Data Platform

Dataset Link: <https://data.gov.tw/dataset/7320>

Application Design

Main idea

The application is an interactive platform for locating speed enforcement zones across Taiwan. It helps drivers find nearby zones, check speed limits, and get real-time updates on changes. Users can also provide feedback or suggest corrections to improve data accuracy. This project promotes road safety by raising public awareness and encouraging community involvement.

Functionality

Information Presented to Users:

- locations of speed camera
- Speed limits for specific roads or zones.
- Directions of the speed camera
- Recent updates or changes to the enforcement zones.
- User feedback and reports for specific zones.

Available Interactions:

- Search and Filter: Users can search by location, or speed limits.
- Feedback Submission: Users can report incorrect data or suggest new zones.
- CRUD Operations: Users can create, view, update, and delete their feedback.
- User Account Management: Users can see their submitted feedback through a personal dashboard.

Scenario of Use:

- A driver wants to check if there are any speed enforcement zones on their route to avoid fines.
- A local resident notices incorrect data and submits feedback
- The authorities release updates to the zones, and the data is reflected on the website in real time.

User-Interactive Data:

- Speed enforcement zones data
- Feedback submissions
- Updates on zone changes
- User dashboard data

Interface

Homepage:

- Search Bar: Search by city, road name.
- Filters: Dropdowns for speed limit.

Feedback Page:

- Feedback Form: Select zone, add description, and optionally upload a photo.

User Dashboard:

- Feedback List: View submitted feedback with options to update or delete.

Updates Page:

- Change Log: Recent updates (new zones, speed limit changes), with sorting by date, zone.

Page Layout Overview:

- Header: Navigation to Home, Feedback, Updates, and Login.
- Main Content: Map view with search and filter options.
- Sidebar: Search results.
- Footer: Project info, contact, and copyright.

Work Plan

Data Preparation

- Download and clean the Taiwan Open Data dataset.

Database Setup

- Design schema and set up tables.
- Configure the development environment.

Backend Development

- Load initial data.
- Create APIs for zone management (CRUD).
- Implement user authentication.

Frontend Development

- Add search and filter options.

Feedback System

- Enable feedback submission (report issues, suggest zones).
- Create user dashboard for managing feedback.

Testing and Documentation

- Test all features and document code.

Deployment

- Final testing, debugging, and deployment.
- Add README with usage instructions.

Discussion

https://hackmd.io/@T0TnZE6kQhCNZ--KmEo-MA/dbms_group3_finalproject/edit

Repo

https://github.com/weeeelly/Final_Proposal