NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

School of Computer Science and Engineering
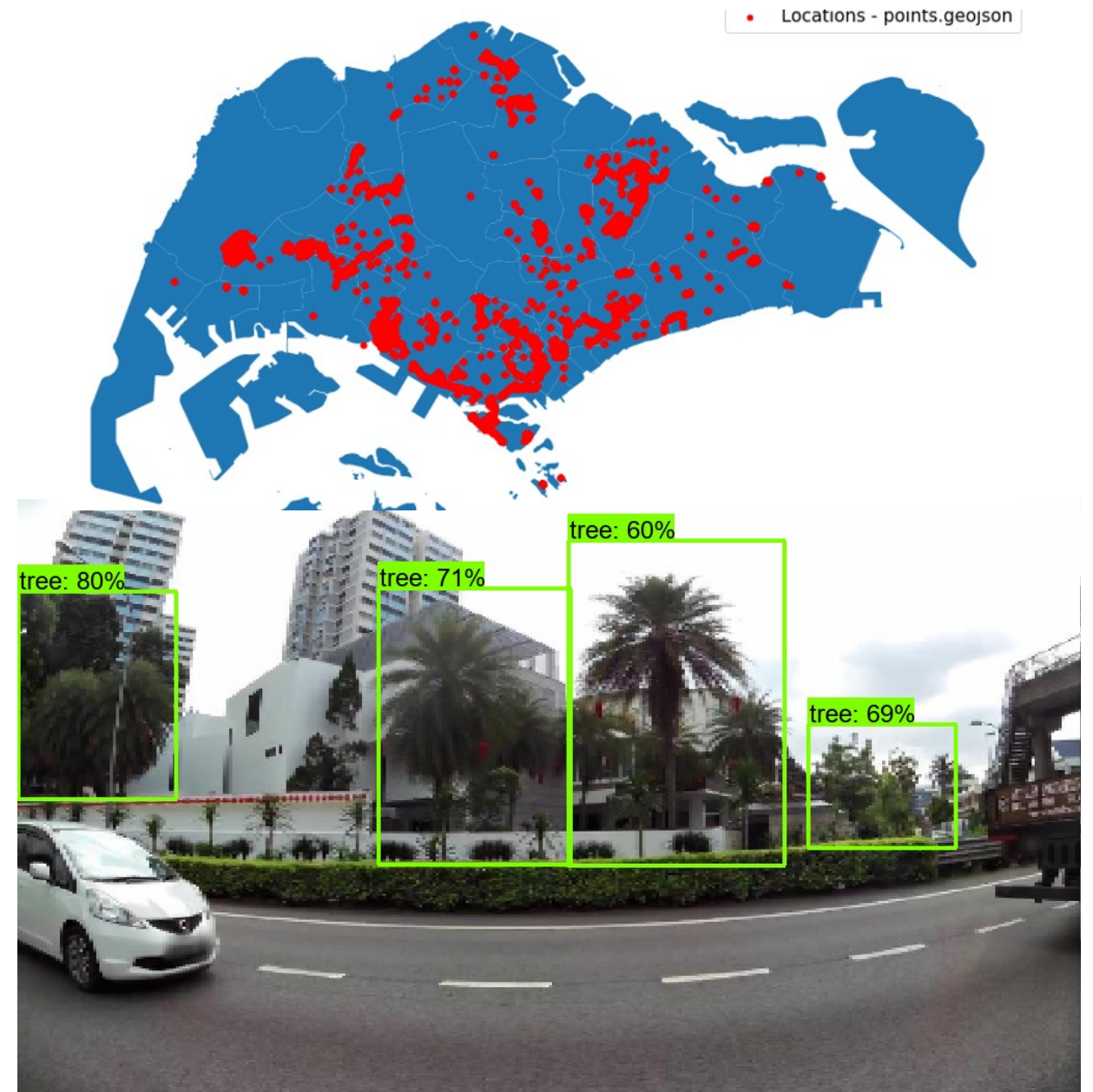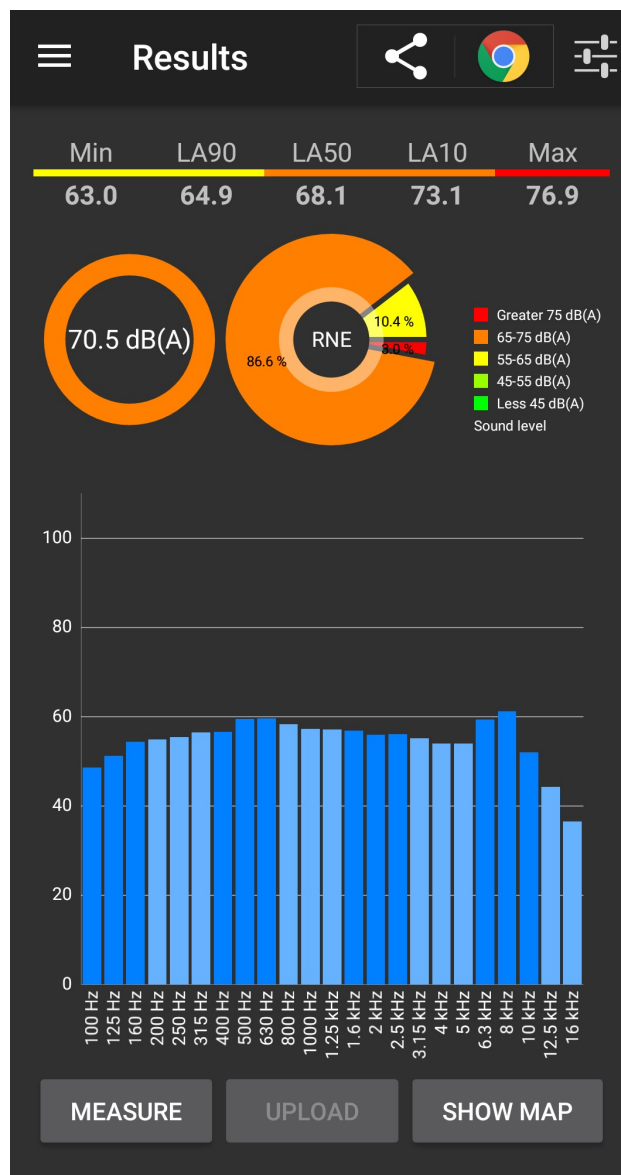College of Engineering

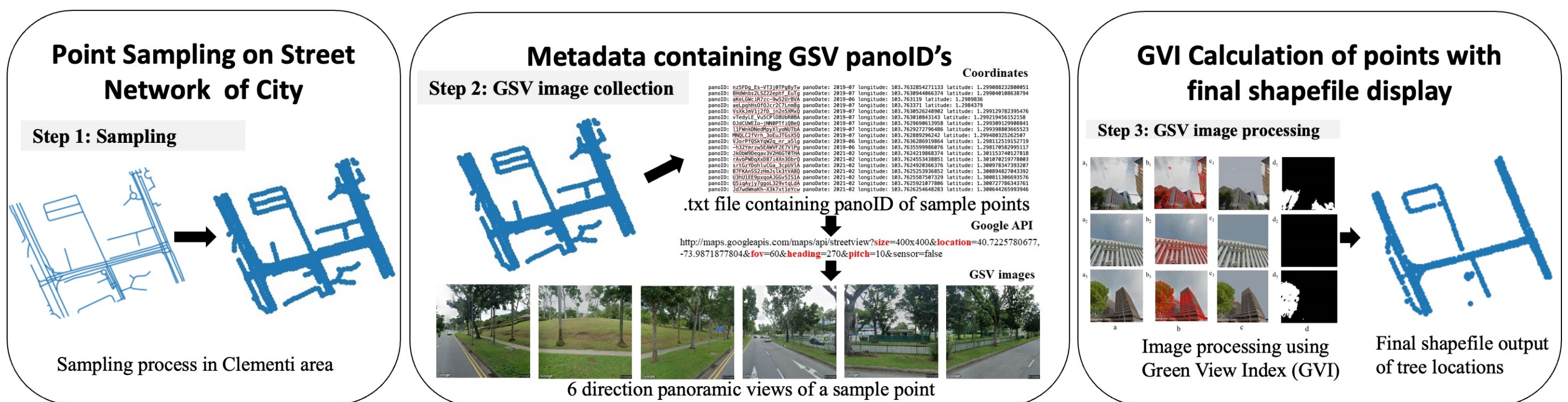# Community noise measure via crowd sourcing

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Left: Screenshot of Noise Capture application **Top-right:** Analysis of distribution of noise data **Bottom-right:** Tree detection algorithm created

Project Objectives:

The project aims to look at the impact of noise using a step-by-step incremental approach that covers the collection of noise and other applicable forms of data, the analysis of noise data, and exploration of the impact of trees in mitigating noise. A systematic approach was used for the collection and storage of the data so that similar studies can be carried out in other cities, e.g. Wellington. New Zealand which is our partner city.

Point Sampling on Street Network of City

Step 1: Sampling

Sampling process in Clementi area

Metadata containing GSV panoID's

Step 2: GSV image collection

.txt file containing panoID of sample points

Google API

http://maps.googleapis.com/maps/api/streetview?size=400x400&location=40.7225780677,-73.9871877804&fov=60&heading=270&pitch=10&sensor=false

GSV images

6 direction panoramic views of a sample point

GVI Calculation of points with final shapefile display

Step 3: GSV image processing

Image processing using Green View Index (GVI)

Final shapefile output of tree locations

Pipeline of a method used to obtain tree location data