AI-powered e-bike detection system

Executor: assessed the feasibility of the project by testing different approaches, tested various hardware solutions, developed the AI model, took care of the dashboarding.

The challenge
Prototyping a device capable detecting the passages of electric bikes.

The solution
Our customer, a municipality in the mountains, wants to track the movements of e-bikes within its territory. In order to do it, we used a device equipped with a microphone capable of recording the spectrogram of frequencies up to 96 kHz and we processed the information with an ML pipeline that was capable to correctly classify the spectral footprint of e-bikes in most cases.

The result
A promising device was identified and installed. An ML model was developed to process its data. Hundreds of e-bike passages were recorded. The data were provided in an insightful dashboard. A technical report was handed to the customer.

> **"** Thanks to data collection enabled by Artificial Intelligence and Google Cloud, the municipality and the tourism promotion agency will finally be able to plan investments and marketing campaigns on sustainable mobility in a data-driven way **"**
>
> Fabrizio Ossola, Opportunity Manager, Como Next

About Como Next
ComoNExT is a Digital Innovation Hub and a MiSE (Ministry of Economic Development) certified startup incubator located in Lomazzo (CO). The objectives of ComoNExT are three: attract innovative businesses, transfer innovation to the territory and encourage the development of new entrepreneurship thanks to the incubation of startups.
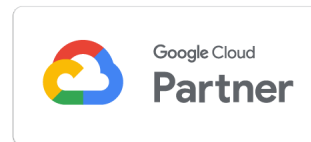
Vertical/horizontal solution: Tourism & Leisure

Primary project location: Italy

About Ennova Research srl
We are leader in AI, cloud and digital transformation, offering innovative GCP-based solutions and advanced GWS collaboration systems

Products
Google Cloud Platform