

CASE STUDY

50% cost reduction and 70% increased revenue for a traffic agency using ARTIFICIAL INTELLIGENCE solution.

info@gleetech.com 🖂 www.gleetech.com 🌐

OVERVIEW

A traffic agency with more than 50 sites had cameras installed on 7 sites. The agency was using traditional methods for counting the traffic and were manually monitoring the traffic. The cost for monitoring all the sites required more than a million dollar budget with 7 times more operational than the current operational cost.

GleeTech developed an AI based smart traffic surveillance system saving the client half a million dollar and reducing the current operational cost to 50% along with increasing the revenue to 70%, enhancing the capability to count the traffic, detect offenders and automatically alerting relevant authorities incase of any accidents.

GleeTech is now performing further traffic analytics for the agency.

CHALLENGES

- 1. The current traffic management systems requires manual monitoring of the traffic and hence prone to human error.
- 2. The traditional way to count traffic in/out flows are too costly and hard to scale.
- 3. Only 5 out of 100 offenders were caught and fined because of manual process.
- 4. Detecting bad driving behavior was almost impossible.
- Currently people have to call authorities to inform about accidents which can cause a loss of life because of delayed response.



SOLUTION

GleeTech have developed an AI based solutions to automatically detect, track, count vehicles along with detecting traffic offenders and alerting authorities about accidents. The solution was developed using python, tensorflow and keras and was deployed as a cloud solution.

The overall solution had been completed in three phases:

- Proof of concept
- Cloud Solution
- Cloud Solution with enhancements

The first phase of the smart traffic solution was only had vehicle detection feature and was deployed on the cloud taking video feed from only one site in order to proof the concept.

SOLUTION - Cont

The second phase of the smart traffic solution was developed in around 6 months and included more features such as traffic counting, detecting vehicles on the marked line, storing video clips of the offenders. This solution was taking video feeds from all 7 sites. The solution had an interface for the traffic officer to watch any site in realtime and search the video clips.

The third phase of the smart traffic solution is currently going on and includes advanced traffic analytics with accident detection and notification system.

Initial phase demo videos:

- <u>https://drive.google.com/file/d/1J5e857m6_I46sG8-We7nc-aR_IKA8</u> <u>zS-/view</u>
- <u>https://drive.google.com/file/d/1yFaVJWGiJ-qR-A8fl7VuUBFBMjps</u> <u>n-Kr/view</u>

RESULTS

- 1. The model have 98% of accuracy in detecting vehicles in the video feed in ideal conditions.
- 2. **50% reduction** in operational cost and super simple to deploy on new sites.
- 3. Reduced response time for accidents to 99.9%.
- 4. **70% increased** revenue by catching traffic offenders.
- 5. Enhanced capability for performing deeper traffic analysis.



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