

Package Management Using OCR

i Introduction

We all are living lives bounded by the shackles of time. Hence everyone seeks for a way to get the maximum output from a given time period. Even the employers don't want their employees to keep performing a repetitive task which can be replaced by a machine. Similar problem was identified by one of the leading building and facilities management software company which wanted to solve this problem using computer vision.

“ This case study showcases how Winjit's Machine Vision was installed as part of the building and facilities management software in a residential tower, enabling the managers to serve more than thousands of residents by managing their packages. ”

u Customer

The client provides software solutions in the domain of facility management. It empowers management of the buildings to handle their myriad day-to-day tasks seamlessly and accurately, helps them foster a sense of community among their residents, and enhances their building's or company's unique brand identity.

The organization offers tailored solutions for property managers looking to upgrade the total experience of managing, working at, or living in their luxury residential properties and commercial spaces.

After identifying a redundancy in the process of package management, which involved a manual filling of data fields in abundance, a solution was desired by the client to completely automate the process of package management.



Requirement

To get the overall view of the scenario, Winjit Technologies MV team communicated with the client to understand the exact requirements. The team identified the key requirements as:

- ▶ Creating database of all the logistic companies with the recipients in the building
- ▶ Creating a database of the contact details of the recipients
- ▶ Integrating MV with the database created
- ▶ OCR was used for data acquisition
- ▶ Smart notification system for the recipients



Challenges

The client provides solutions to more than thousands of commercial buildings. The receptionist at most of the buildings receive more than one lakh parcels for the recipients in the building, in a month.

Updating the details of every parcel either manually or typing it in the system, makes this an onerous job for the person.

Also, updating each concerned person with the parcel/package received increases the work of the building manager or receptionist.



Solution

Machine vision for smart building management was achieved by the Winjit MV team with the value addition of linking SMS alerts with the designed system.

A dedicated algorithm was made for data acquisition. General cases were studied to find what are different formats used by various logistics companies on their labels. Keeping that in mind, the algorithm was designed.

The solution comprised of defining mini frames in a still frame, which extracted the following information- sender's details, receiver's details, supplier's details, logistics details, etc. All the information was classified based on the labels created in the data base.

As soon as the package was scanned by the camera, an SMS alert was generated at the concerned receiver's end, making him aware that a package delivered for him is there in the premises.



Achievements & Benefits

- ▶ Time management of receptionists increased significantly.
- ▶ Time taken to scan a package and update its details reduced by more than 95%.
- ▶ SMS alerts were sent to the recipients to make them aware that they have received a parcel/package.
- ▶ The same system was proposed for their inventory management as well.



Conclusion

The solution helped the client with better management of the packages arriving at the building. This led to efficient usage of time, allowing the receptionists and managers to pick up other tasks as well.

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