Multi Gate Society Vehicle Management System
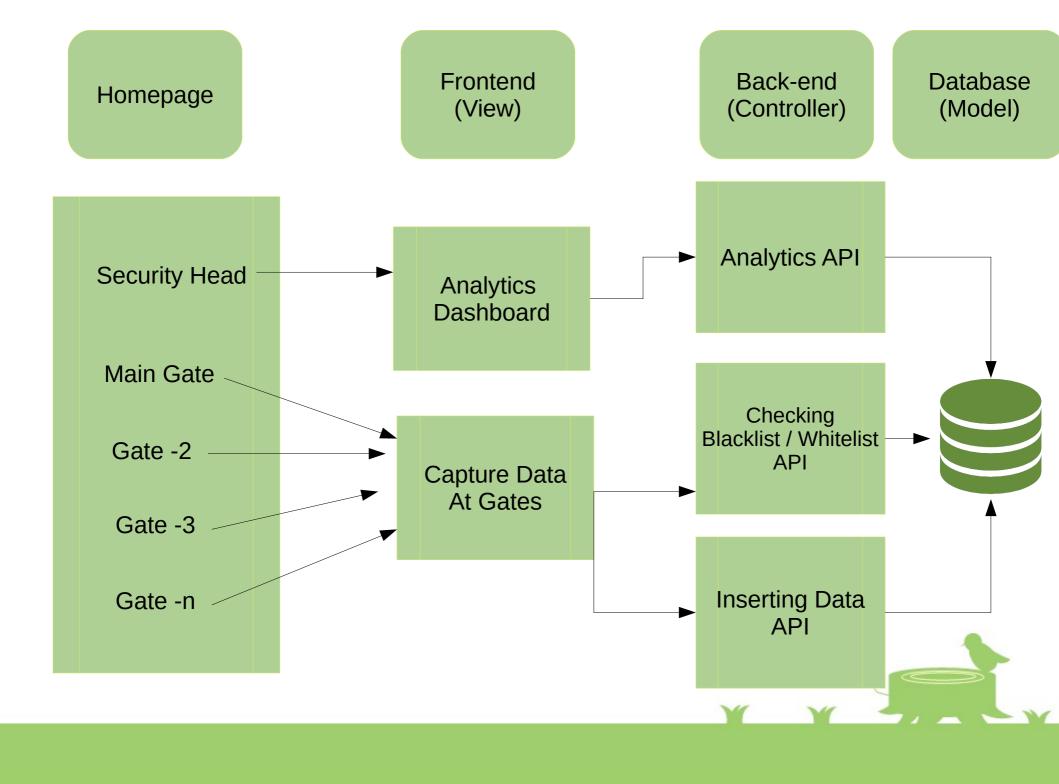
A Full stack App
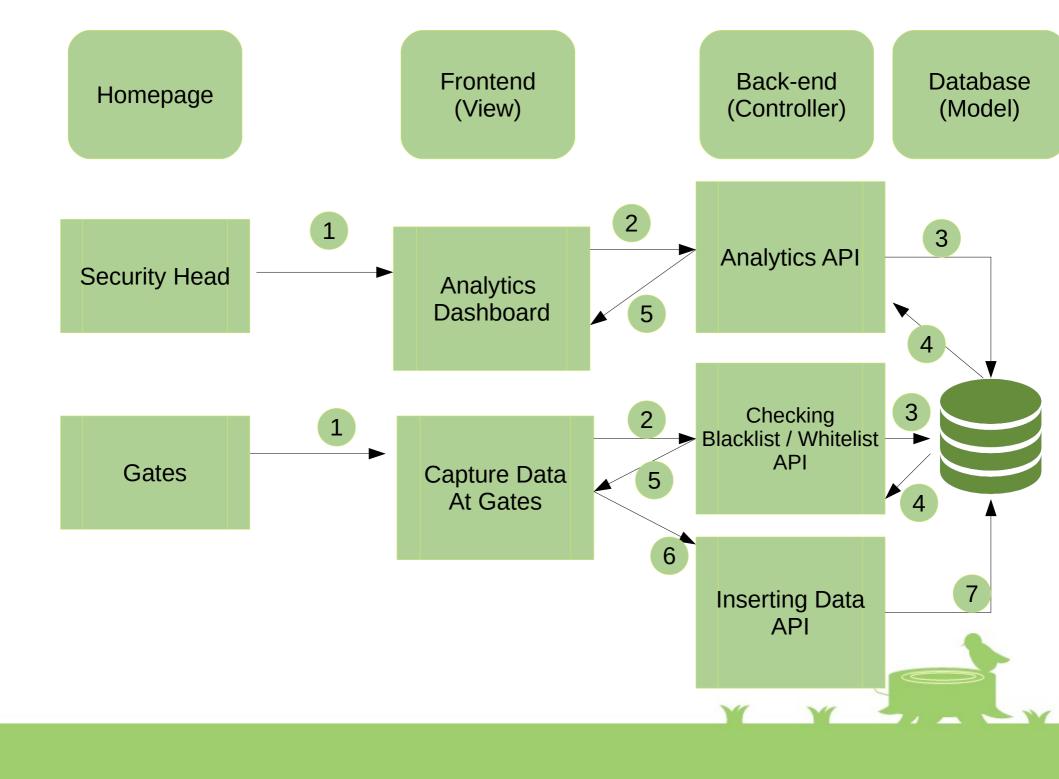-Pankaj Kumar

Tech Stack

- Front End
  - HTML5, CSS3
  - Bootstrap, Jquery

- Back-end
  - Flask (Python)
  - Many other libraries (refer requirements.txt)

- Database
  - PostgreSQL

System Diagram

Flow of Data

| Homepage | Frontend (View) | Back-end (Controller) | Database (Model) |

Security Head —1→ **Analytics Dashboard** —2→ **Analytics API** —3→

Analytics API —5→ **Analytics Dashboard**

Analytics API —4→

Gates —1→ **Capture Data At Gates** —2→ **Checking Blacklist / Whitelist API** —3→

Checking Blacklist / Whitelist API —5→ **Capture Data At Gates**

Checking Blacklist / Whitelist API —4→

Capture Data At Gates —6→ **Inserting Data API** —7→

Reproducing the App

- Install
  - Python 3
  - All libraries listed in requirements.txt
  - PostgreSQL 11
  - Mozilla Firefox / Google Chrome
- Save
  - Database credentials in server.py at
    - Line 50, 77 and 127
  - Email credentials in server.py at
    - Line 19

- Run server.py in terminal
- Open "http://localhost:5000" in web browser
- Select any gate to enter
- Allow browser to access web cam. This app uses live stream from web cam to simulate CCTV
- Click "Capture" when vehicle arrives. This will save a temporary copy of snapshot at "/images" in server.
- Enter "Vehicle Number" & "Vehicle Type" and then hit "Check"
- If vehicle is blacklisted Red banner will appear with "Exit" button

- If Whitelisted or new vehicle, a green banner appears with "Enter" button.

- "Enter" button will save all data (including image) in "VehicleRecords" table.

- Checking will happen with "listedVehicles" table

Database Schema

Table "public.vehiclerecords"

Column	Type	Collation	Nullable	Default	Storage	Stats target	Description
vehicletype	character varying(50)				extended		
vehicleno	character varying(50)				extended		
vehicleimage	bytea				extended		
decision	character varying(20)				extended		
timestamp	timestamp with time zone		not null	now()	plain		

Table "public.listedvehicles"

Column	Type	Collation	Nullable	Default	Storage	Stats target	Description
vehicleno	character varying(50)				extended		

An Effort by ...

Pankaj Kumar

8097863641

805.bluebell@gmail.com