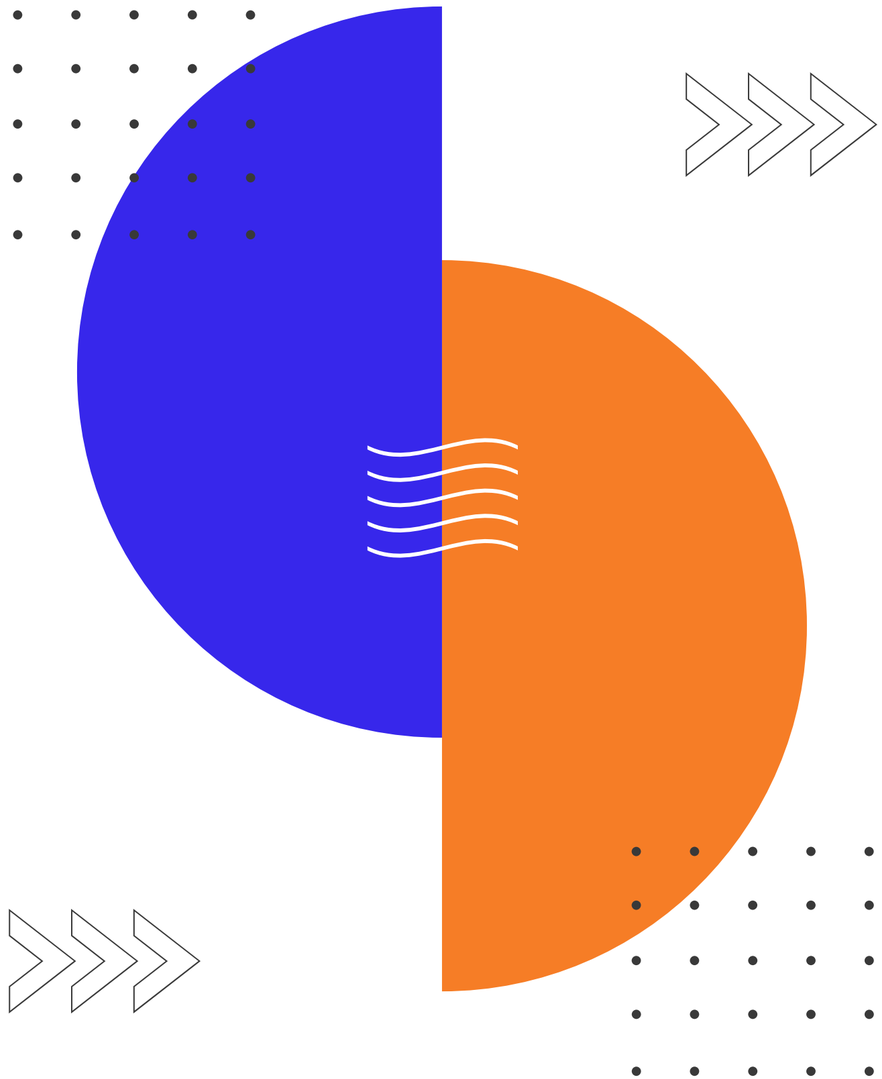


LESEDI

automating emergency response

POLICY TARGET

01 Ensure that effective data backed management of the disaster management act

02 Provide transparent procurement notifications for deploying emergency response in areas where emergency response is required.

03 Enforce the ability of mass data collection from users utilizing social media.

between 1993 and 2015, 38.45% of all deaths were time critical conditions

THE PROBLEM

The inability of local government to dispatch local emergency services in time means that the emergency services response teams are not optimized to meet the growing demand for time critical emergency response capabilities of a growing population.

THE SOLUTION

ON-TIME EMERGENCY DISPATCH

01

LESEDI is an A.I powered platform that allows emergency response teams to dispatch response vehicles in an area based on social media data & spatial planning data to suite emergency response teams with the information of what type of incidents occure in a particular area and how busy that area is in that point in time.

02

LESEDI also allows residents to subscribe to response feeds to see how many emergency response vehicles are currently deployed in that area and what their specialization is. This thus allows administrators to use on-hand data to actually procure the neccessary amount of vehicle types and equipment to assist in an event of an incident happening that area.

03

LESEDI allows private ambulance providers to enrol as 3rd parties to help offload capacity constraints in emergencies

TECHNOLOGY

OUR TECHNOLOGY APPROACH

01

Our system is built primarily using PHP via the laravel framework with the user interface built with InertiaJS using React

02

The Machine Learning stack is implemented using RubixML with MinMax, OneHotEncoder and RandomHotDeckImputer to preprocess the data behind a Naive Bayes Algorithm with furthur processing using a SoftMax Classifier

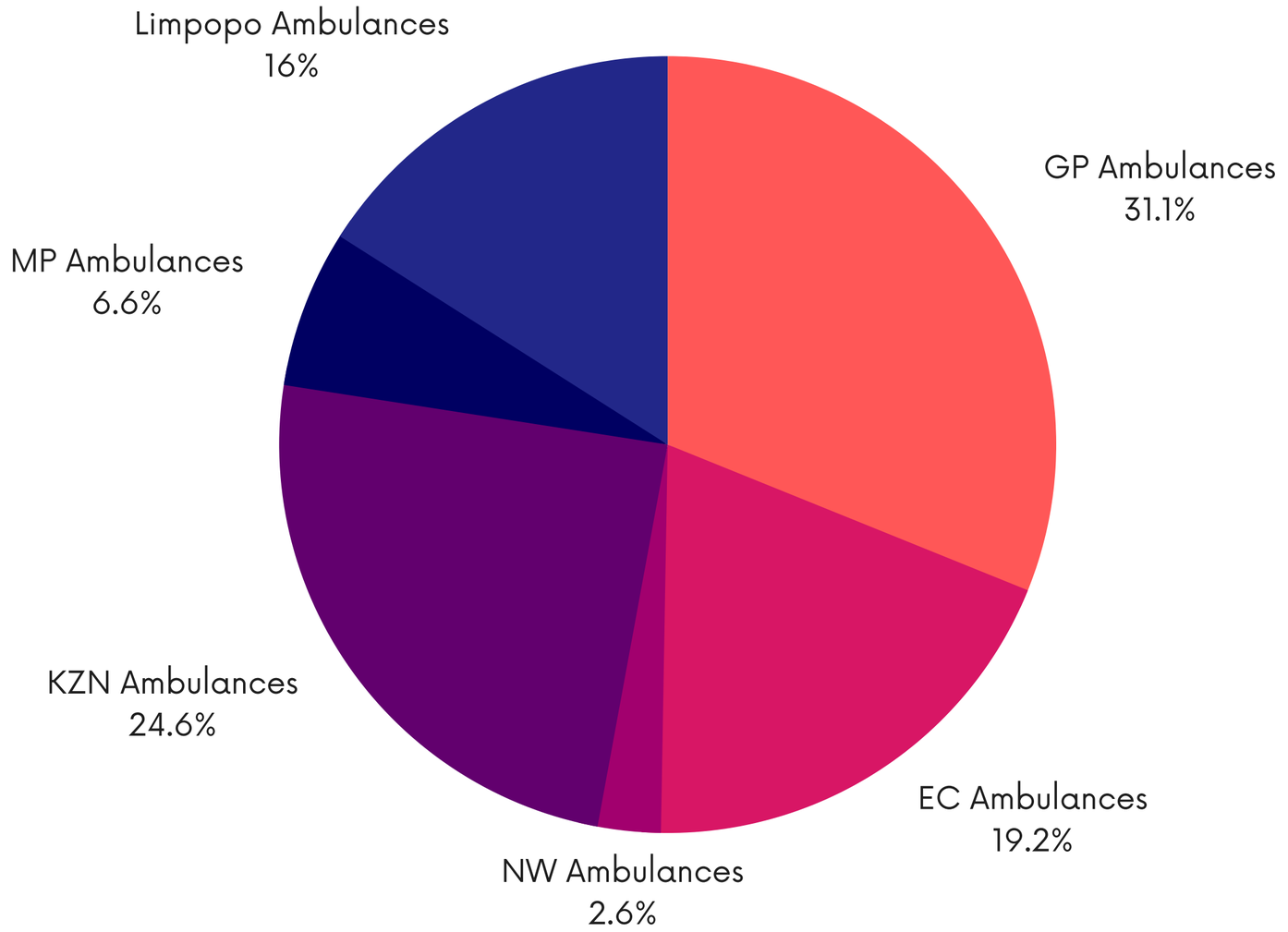
03

The Application is sitting behind a Traefik Load Balancer that ensures the model servers are always online with peak data coming in

DATA

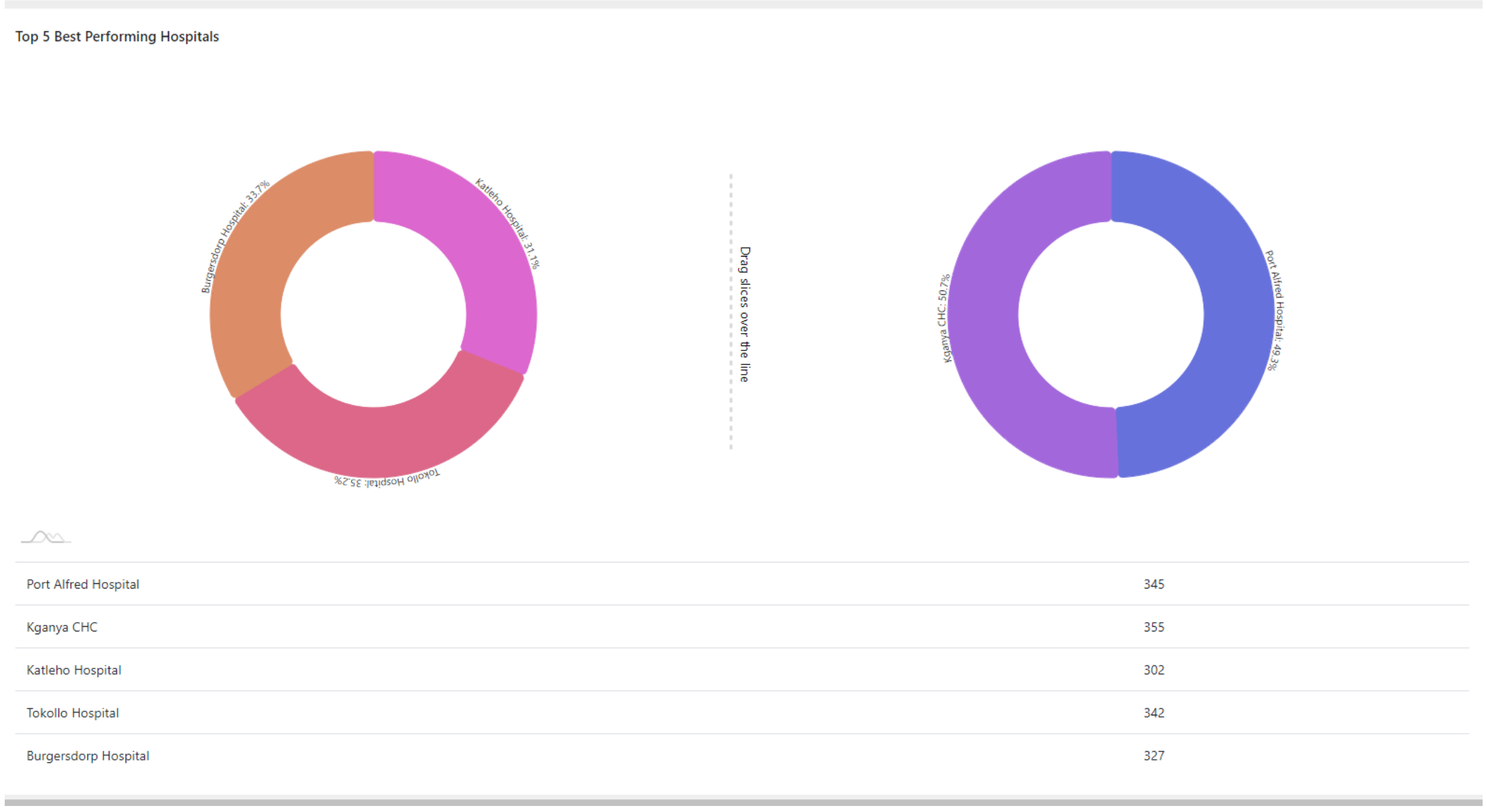
Quantitative Analytics

A recent Bhekisisa survey revealed that South Africa only has 1971 state-run ambulances on the road.
This falls well short of the 5700 – one per every 10 000 people – recommended by the health department. This is only enough ambulances to
cover a third of the population.



Quantitative Analytics

Sample extract from Project Lesedi showing an interactive viz graph for best performing hospitals in the submitted dataset utilizing lavensthein library to analyze twitter streams.



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THANK YOU