AURA

(Advanced Unified Response Analytics)

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Problem

Solution

Challenges

Impact

The Problem

1st

Natural disasters affect millions

Overview

2nd

Traffic causes hours of delays

Evacuation

3rd

Aid allocation can be optimized with the right data

Resources

4th

How can we solve this?

Solution

Statistics

People During Evacuation
1300 people reported missing after Hurricane Katrina because of a lack of information

Roads During Evacuation
Less than 8% of roads were operational a month after Hurricane Maria which created severe logistical barriers.

Post-Disaster Relief
An estimated 20-30% of resources did not reach areas where most needed and went elsewhere during the 2010 Haiti Earthquake

Pre-Existing Infrastructure

Government-Owned

Traffic cameras, public surveillance cameras, and traffic pressure plates

User Technologies

Smart doorbell cameras, home security systems, and business security cameras

Crowdsourced Data

Crowdsourced maps data and social media

Data Sources

Cameras & Sensors	CCTV, Traffic Cameras, Dams, GPS, Pressure Plates
Hospitals	Capacity, EMS availability
Infrastructure	Power grid, Buildings, Satellites, Maps
Social Media	Twitter and Instagram videos

User-Provided Technologies

Types of Technologies

Smart doorbell cameras, outdoor home security systems, and business security cameras
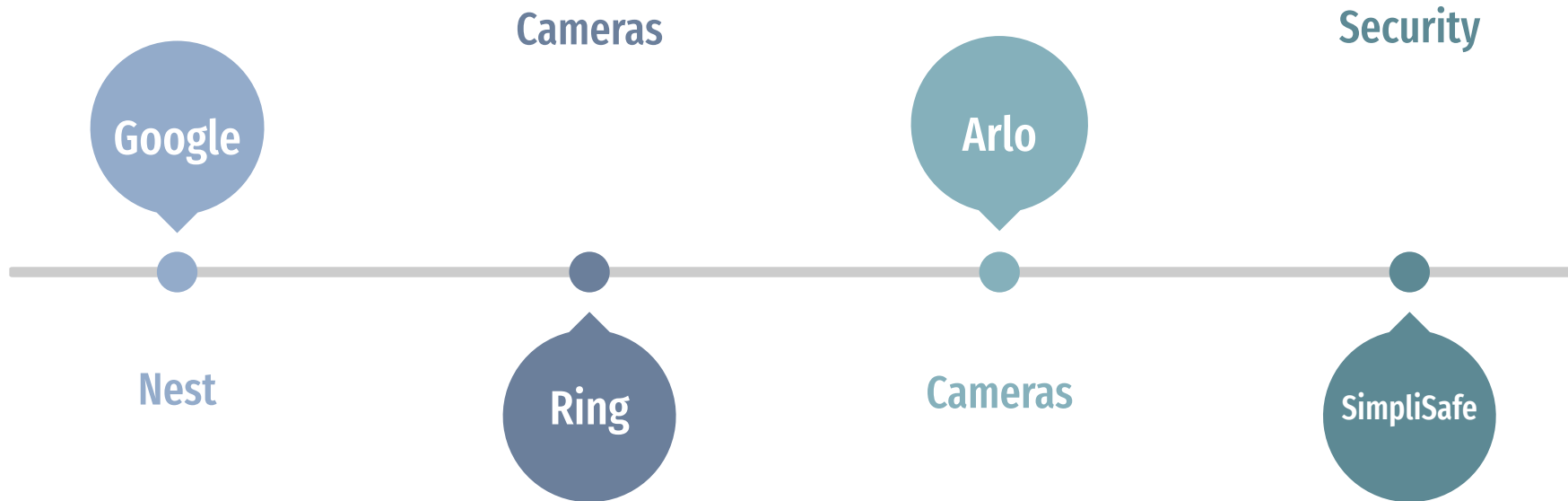
Privacy Concerns

- Voluntary data collection
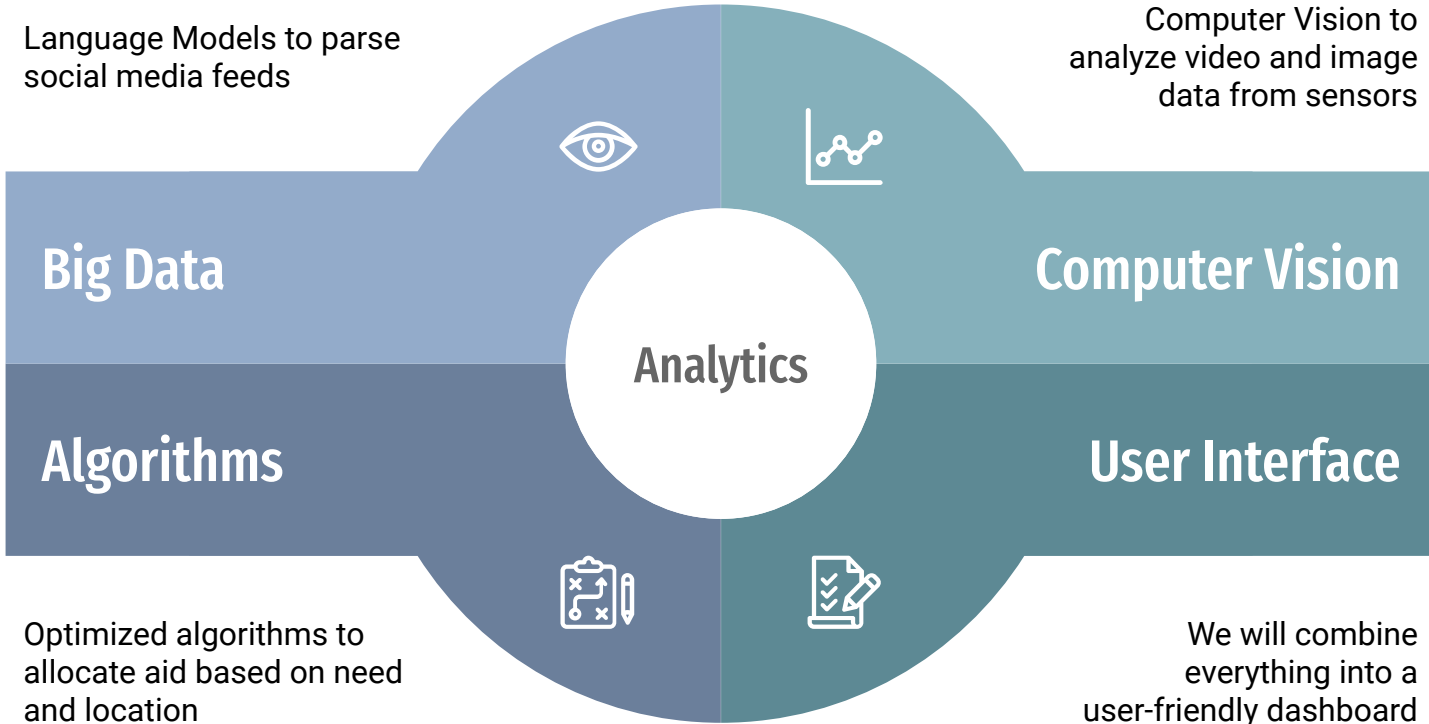- Only access that data during natural disaster
- Will notify users

Companies to Partner With

Ring, Google, Arlo

Partnerships

Cameras

Security

Google

Arlo

Nest

Ring

Cameras

SimpliSafe

Technologies

Language Models to parse
social media feeds

Computer Vision to
analyze video and image
data from sensors

Big Data

Computer Vision

Analytics

Algorithms

User Interface

Optimized algorithms to
allocate aid based on need
and location

We will combine
everything into a
user-friendly dashboard

Sustainability

Existing Infrastructure
- No new hardware required
- No added footprint from this solution

AI-driven analysis
- Less manpower
- Minimizes unnecessary deployment

Resources
- Optimizes resource allocation
  - Less waste

Inclusive
- Minorities and lower income individuals treated the same

Emissions
- Reduced fuel consumption
  - Help dispatched only to where needed

Market Sizing and Economic Feasibility

Government
Contracts

Insurance
Companies

Impact

INTRO — Lots of issues related to a lack of data when it comes to natural disasters

CHALLENGE — How can we improve the evacuation process and resource distribution?

SOLUTION — Centralize and analyze data to use for assistance during natural disasters

BENEFIT — Improved evacuation checking and post-disaster relief

RESULT — Less lives lost during evacuation and after the disaster occurs