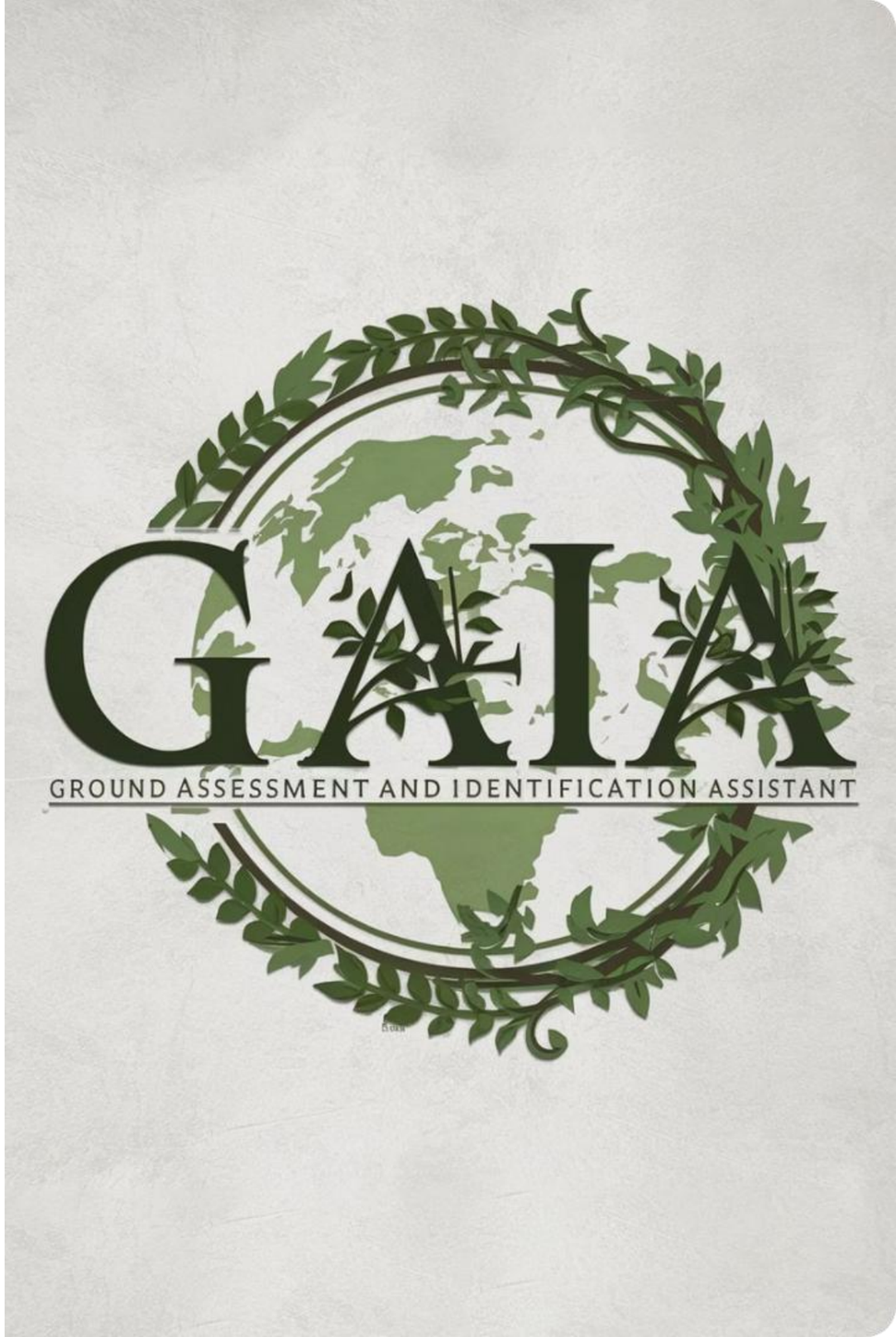
G.A.I.A.:

Ground Assessment and Identification Assistant

An AI-powered pothole detection system that uses computer vision and vision and machine learning to automatically identify and map road road hazards, enabling faster repairs and safer driving.



The Pothole Problem

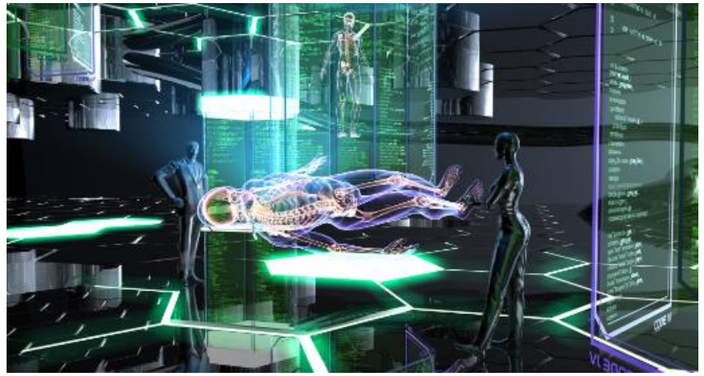
Potholes are a widespread and persistent issue, costing billions in in vehicle damage and leading to countless accidents each year. Current year. Current detection and repair processes are slow and reactive, reactive, often leaving roads in disrepair for extended periods.

Addressing this problem requires innovative solutions to proactively proactively identify and address potholes before they become a hazard a hazard to drivers and pedestrians.

Introducing G.A.I.A

G.A.I.A, or the Ground Assessment and Identification Assistant, is an innovative AI-powered platform designed to detect and map potholes on roads. By leveraging advanced computer vision and machine learning algorithms, G.A.I.A can automatically identify potholes from images captured by drones or vehicle-mounted cameras, providing detailed reports to help cities and municipalities prioritize road maintenance.

Key Features of G.A.I.A



AI-Powered Detection

G.A.I.A utilizes advanced computer vision and machine learning algorithms to accurately identify potholes in real-time, even in challenging lighting or weather conditions.

Data Analytics

The system generates detailed reports on pothole locations, severity, and trends, providing actionable insights to guide infrastructure maintenance and repair efforts.

Scalability

G.A.I.A is designed to be adaptable to adaptable to a wide range of environments and infrastructure setups, making it a versatile solution solution for cities and municipalities municipalities of all sizes.

Technology Behind G.A.I.A

Object Detection Model

G.A.I.A. leverages advanced object object detection algorithms to accurately identify and classify potholes, cracks, and other road road defects from overhead imagery.

Cloud Processing

Captured data is securely transmitted to the cloud for high-high-speed analytics, leveraging leveraging distributed computing computing power to generate insights in real-time.

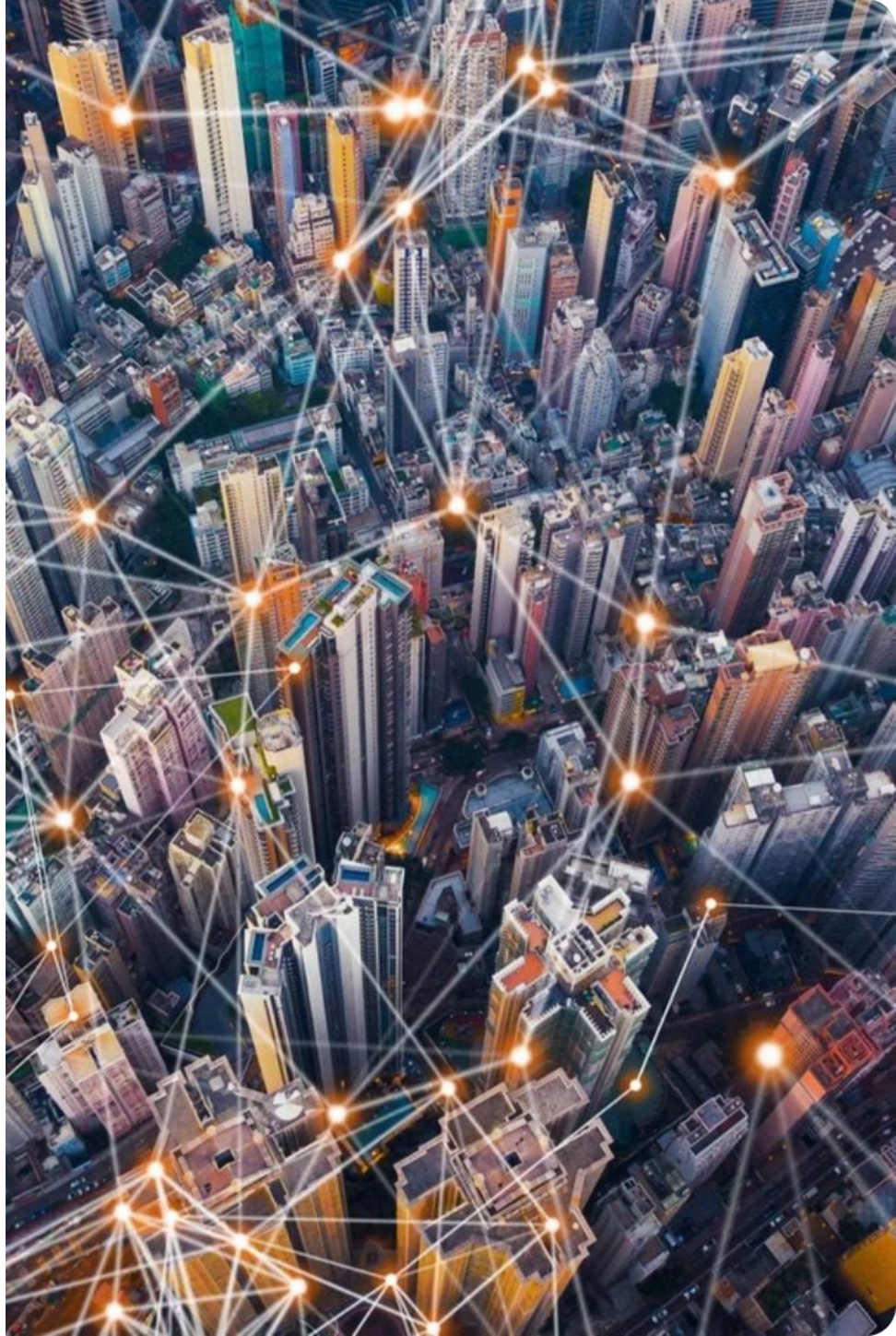
Security & Reliability

Robust security measures and redundant systems ensure the privacy and integrity of user data, data, delivering a reliable and trustworthy solution.

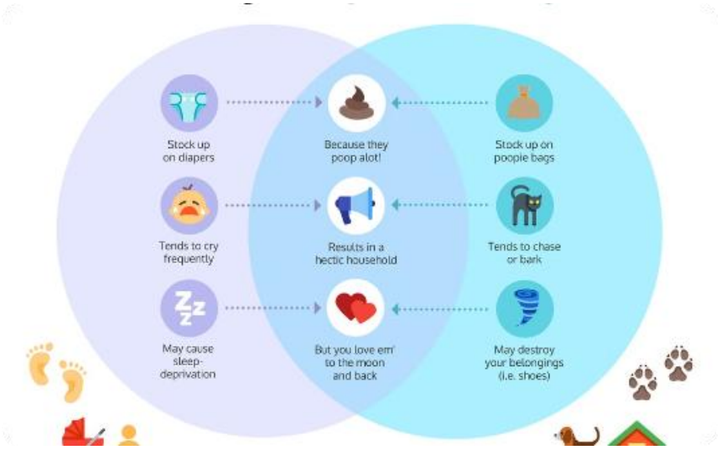
Market Opportunity

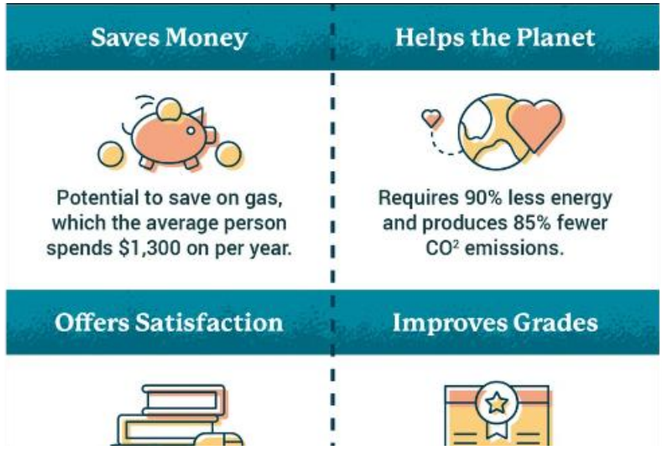
G.A.I.A. has immense potential in the rapidly growing smart infrastructure market, targeting municipalities, transportation agencies, agencies, and road maintenance companies seeking advanced AI AI solutions to optimize infrastructure management.

Compared to other infrastructure monitoring solutions, G.A.I.A. stands G.A.I.A. stands out with its unparalleled accuracy, efficiency, and cost- and cost-effectiveness. Our proprietary computer vision algorithms and algorithms and sensor fusion technology allow us to detect and classify and classify infrastructure defects with industry-leading precision, far precision, far surpassing manual inspections or basic image recognition recognition tools.



Competitive Analysis





Comparison

G.A.I.A stands out from existing pothole detection and infrastructure management solutions with its advanced AI-powered computer vision capabilities and comprehensive data analysis.

Unique Strengths

The system's ability to accurately identify pothole severity, prioritize repairs, and integrate seamlessly with municipal infrastructure sets G.A.I.A apart in the market.

Advantages

G.A.I.A offers cities a cost-effective, scalable solution to proactively manage road infrastructure, reducing maintenance costs and improving driver safety.

Business Model

Revenue Streams

G.A.I.A. will generate revenue through product sales, subscription subscription services, and data analytics services to help cities and and departments identify and address infrastructure issues.

Pricing Strategy

G.A.I.A. will use a tiered pricing model, offering a basic free version version and premium subscriptions subscriptions with advanced features and support. Pricing will will be competitive and aligned aligned with the value delivered. delivered.

Monetization Opportunities

By leveraging the rich data collected, G.A.I.A. can also provide provide valuable analytics and insights to generate additional revenue streams through data-driven services.

Roadmap

1

Short-Term Goals

Launch G.A.I.A in 3 major cities, onboard 5,000 users, and continually improve the app based on user feedback.

2

Medium-Term Expansion

Expand to 10 additional cities, grow the user base to 50,000, and develop new new features like pothole prediction and automated reporting.

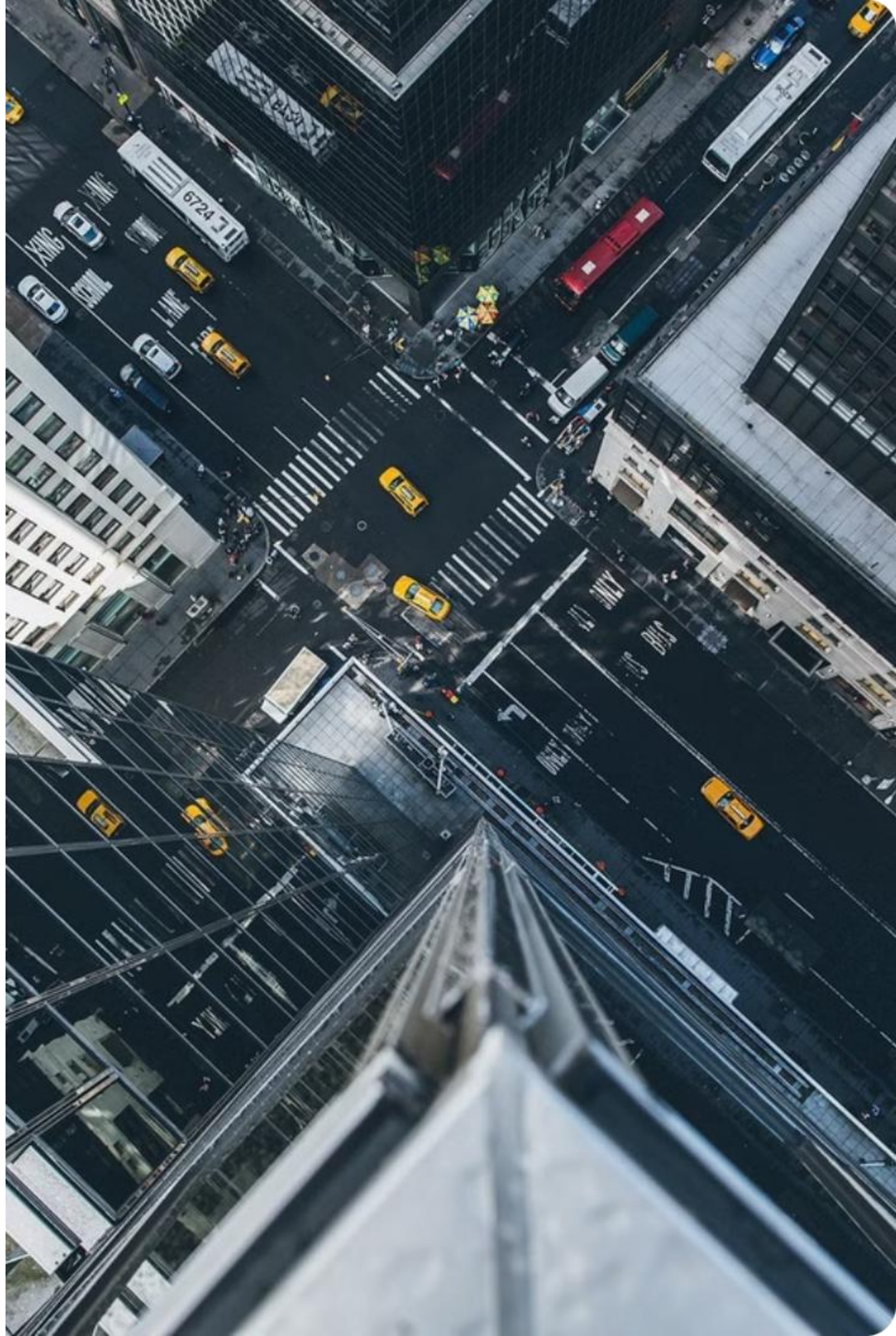
3

Long-Term Vision

Become the industry-leading ground assessment and identification assistant, serving assistant, serving over 1 million users across the country.

Conclusion

G.A.I.A. has the potential to revolutionize ground assessment and identification, offering a comprehensive and efficient solution to the persistent problem of potholes and road infrastructure issues. By leveraging cutting-edge technology, G.A.I.A. can provide accurate data and insights to help municipalities prioritize repair efforts and optimally allocate resources.



No.	Title	Cost	Description
1	Compute instance	₹ 15,000.00	Renting a server to train the ML Model on cloud resources
2	AI Development	₹ 15,000.00	Development of ML Model for our device
3	Raspberry Pi Camera	₹ 2,500.00	Camera Module which will be the input device for the images.
4	Google Coral Accelerator	₹ 13,000.00	Edge TPU co-processor, enabling high-speed machine learning inferencing on a wide range of systems
5	Raspberry Pi Display	₹ 5,000.00	Display to view the results of live inferencing
6	Raspberry Pi 5	₹ 9,000.00	Single Board Micro computer controlling the entire device
7	Raspberry Pi Zero 2 W	₹ 2,500.00	Single Board Micro computer controlling the entire device
8	Casing Design	₹ 10,000.00	Design the casing for the device
9	Casing	₹ 10,000.00	The casing which will contain our device
10	Battery	₹ 5,000.00	Battery to run the device
	Total	₹ **87,000.00**	