SplitSec.AI

Rapid Gunshot Awareness for Outdoor Events and Parks

Supporting faster, safer response in large, open, temporary environments

Executive Summary

Public parks and outdoor event spaces present unique safety challenges. Open areas, temporary layouts, limited fixed infrastructure, and high public visibility make early threat awareness both critical and difficult.

SplitSec AI is a privacy-first, smartphone-based gunshot detection solution designed for these environments. It does not replace event staff, contracted security, or emergency responders. Instead, it provides an early signal that helps reduce uncertainty, improve coordination, and support faster escalation when seconds matter.

For park districts and event operators, SplitSec AI offers a way to add gunfire awareness without installing cameras, microphones, or permanent infrastructure. This makes it well-suited for large, open, and temporary venues where traditional systems often leave gaps.

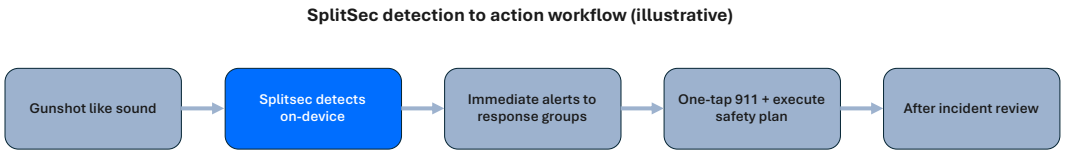

Figure. Event-day detection-to-action workflow (illustrative).

This approach can be particularly valuable where permanent infrastructure is impractical, and staffing and layouts change event to event.

1. The Safety Challenge in Open and Temporary Environments

1.1 Limited visibility and uneven coverage

Unlike enclosed facilities, parks and outdoor venues often lack comprehensive camera coverage, defined perimeters, and acoustics that make sound direction obvious. Even where cameras exist, effectiveness is constrained by line of sight, lighting, and the scale of the venue. In large open areas, visual systems rarely provide full situational awareness.

1.2 Temporary layouts and distributed staffing

Public events commonly involve temporary stages, tents, changing crowd layouts, seasonal or contract staff, mobile command posts, and reliance on radios and manual reporting. These conditions make it difficult to ensure that everyone hears, interprets, and escalates a possible threat consistently.

1.3 High public and legal scrutiny

Parks and event operators are accountable to municipal leadership, the community, permitting authorities, insurers, and legal counsel. After an incident, the questions are often time-based and process-based: When did staff become aware, when did they escalate, and what actions were taken early?

2. Why Sound-Based Detection Matters Outdoors

In outdoor environments, sound is often the earliest and most widely available signal. Gunfire can be heard across long distances, even when it cannot be seen. In spaces where cameras are sparse or impractical, sound-based detection may be the only scalable way to identify a potential threat quickly.

SplitSec AI addresses this reality by analyzing acoustic patterns on smartphones to detect signatures consistent with gunfire in real time. Detection runs on the device, and raw audio is not recorded or uploaded. Detection runs locally on the phone. Connectivity is only required to deliver alerts to other users or dashboards.

3. SplitSec AI Capabilities for Open and Temporary Venues

3.1 Models trained for real-world conditions

SplitSec AI models are trained on tens of thousands of labeled sound samples, including gunfire and common non-threatening sounds (for example, fireworks and construction noise). This training helps reduce false alerts in complex outdoor environments.

3.2 On-device, privacy-first analysis

All sound analysis runs on the smartphone. SplitSec does not store or upload raw audio. This approach supports situational awareness while respecting privacy expectations in public spaces.

3.3 Optional administrative visibility

An optional dashboard can allow designated administrators to view alerts and timelines across an event area. This supports command-center coordination and post-incident review without introducing continuous surveillance.

3.4 Approximate location awareness, where supported

With sufficient device coverage, SplitSec AI can provide approximate location context using multiple device signals. Accuracy varies based on layout, crowd density, and environmental conditions.

These capabilities are designed to support awareness and coordination in large, open areas where visual systems may be limited, without requiring permanent installations.

4. How SplitSec AI Supports Event and Park Operations

4.1 Faster shared awareness across a distributed area

When a possible gunshot is detected, SplitSec can alert designated staff or security personnel at the same time. This reduces reliance on a single individual's judgment and helps create shared awareness across a large area. Instead of debating what was heard, teams can move more quickly into established response protocols.

4.2 Safer investigation and clearer escalation

In open spaces, the source of a sound may be far from any one staff member. Faster awareness can help staff take additional precautions before moving toward uncertainty. It can also support clearer escalation to supervisors and emergency services.

4.3 Designed for temporary and mobile use

Because SplitSec runs on standard smartphones, it can be deployed quickly for festivals, concerts, parades, seasonal events, and temporary activations in parks. No permanent installation is required, and coverage can be adjusted based on event layout and staffing plans.

5. Privacy Considerations in Public Spaces

Privacy is a critical concern in parks and public gatherings. SplitSec is designed to minimize data exposure: raw audio is not stored or uploaded, and sound analysis runs on the device. SplitSec does not use cameras, video capture, or facial recognition. This design helps municipalities enhance safety while respecting community expectations around surveillance and civil liberties.

6. Complementing Existing Safety Plans

SplitSec AI is not intended to replace trained staff, security personnel, emergency response procedures, radios, or command structures. It adds an early awareness layer that can integrate with existing protocols.

As with any detection system, false positives must be managed operationally. SplitSec is designed to support clear escalation guidelines and human decision-making rather than automated response actions.

7. Defensibility and Public Accountability

After a critical incident, stakeholders often ask: When did you know, when did you escalate, and what actions were taken early?

SplitSec can help reduce uncertainty during an event and support a clearer, time-stamped narrative of alerts and response decisions during evaluation. This can help event operators review what happened, improve procedures, and communicate more clearly with stakeholders after an incident.

Conclusion

Open parks and large public events present safety challenges that cannot always be addressed through cameras or fixed infrastructure alone. In these environments, sound-based awareness can play a critical role in early threat recognition.

SplitSec AI offers park districts and event operators a privacy-first, mobile approach to gunfire detection aligned with the realities of open spaces, temporary layouts, and public accountability. By reducing uncertainty early in a potential incident, SplitSec helps support faster, safer, and more coordinated response when it matters most.

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