As the world’s leading family safety app, Life360 provides real-time support that keeps families safe at home, on the go, and on the road — with driver reports, roadside assistance, and crash detection features.
The challenge

With over 33,000 yearly fatal motor vehicle crashes in the U.S., Life360 identified an urgent need to extend their safety features to the road. After launching a crash detection feature in 2016, Life360 recognized a need to improve accuracy and integrate technology that enabled dynamic program development.

To continue growing their road safety program, Life360 needed a partner that could:

- Accurately identify true crashes
- Ingest and generate insights from billions of data points
- Collaborate on new learnings to provide timely program updates
- Establish thought leadership to drive program innovation

WHAT IS CRASH DETECTION?

Arity’s advanced sensor technology automatically detects when a Life360 user is in a car accident and alerts its safety program to notify the driver and passengers’ emergency contacts, dispatch first responders, or start the process of generating an insurance claim.
Deciding factor

With a platform that captures two million trips per hour, expertise to analyze billions of mobile data points, and a hunger for innovation and experimentation, Life360 decided Arity could improve accuracy and drive future program development.

The approach

Beyond industry expertise and a shared commitment to road safety, Life360 recognized Crash Detection by Arity could add program value with an algorithm informed by:

Billions of miles of driving data
Arity data scientists analyzed rich claims data to develop an algorithm that accurately detects crashes.

Industry relationships
Arity leveraged its industry network to enrich data sets with IIHS and NHTSA crash lab test results.

Advanced research
Arity experts enabled accurate accident detection by evaluating car speed and force impact to determine common crash speeds.

“Life360 saved my life....I have crash detection on, and it truly works. It let my husband know I was in a car accident and sent him my location.”

CHEYENNE AND MICHAEL,
LIFE360 MEMBERS
The solution: Crash Detection

Supported by Arity’s expertise, Crash Detection by Arity substantially increased Life360’s program accuracy and enabled learnings to continually expand detection capabilities.

Crash Detection enriched Life360’s existing program by:

- Exposing and reducing missing crash types
- Identifying GPS and acceleration anomalies that occur in high-impact activities
- Accounting for discrepancies between iOS and Android sensor detection
- Establishing a high-fidelity labeled data collection pipeline to provide data that retrains algorithm subcomponents for program changes

The results

18,000+ average monthly high confidence crashes detected since November 2020
30k+ projected detected crashes that receive emergency response
1,174 average monthly emergency vehicles dispatched
250,000 labeled true positives and false crashes collected in two years

Over the last two years, Arity matured its algorithm precision to reduce false crash detection, improved detection recall by 50%, and identified 100,000 true positive crashes.

Because of these detection accuracy and algorithm improvements, Life360 plans to continue working with Arity to innovate its crash detection program and keep customers safe on the road.

"By embracing experimentation and prioritizing accuracy, Arity has added value to our program even beyond our increased ability to keep families safe on the road."

LIFE360 EMPLOYEE
Contact us

To learn more about Arity Crash Detection and mobility solutions, please contact sales@arity.com.

About Arity

Arity is a mobility data and analytics company that provides data-driven solutions to companies invested in transportation to enable them to make mobility services smarter, safer, and more economical.

Insurance companies, automobile OEMs, shared mobility companies, and governments turn to Arity to better understand driving behavior, manage risk, operate more safely, and ultimately increase their bottom line.

The Arity platform has processed over 400 billion miles of historical anonymized driving data, from more than 23 million active telematics connections and 10 years’ experience analyzing driving data from cars and mobile devices.