productops

COMPUTER VISION ON THE EDGE

A productOps Innovation Project

Cyclist

99%
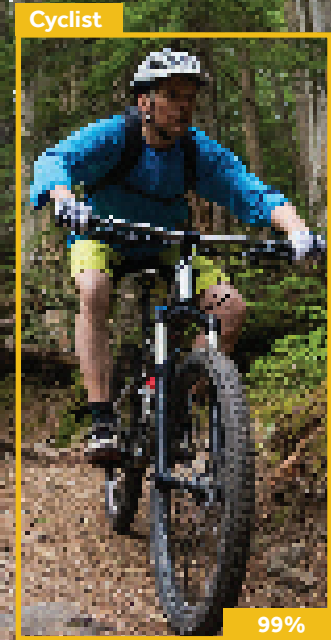
THE CHALLENGE

Accurate trail usage data is critical to inform resource allocation and land management decisions. Gathering the data manually can be time intensive, expensive, and incomplete.

Current Solutions

Infrared and magnetic sensors use low power but provide incomplete data of trail usage.

Challenges

Conditions with no power or Internet

Accuracy in different weather conditions & locations

Data intelligence & forecasting

Rapid development

Business Intelligence

By having rich trail data combined with environment data such as weather, land managers can quickly get at important learnings and predict future usage.

Cyclist

168

Hiker

117

Equestrian

35

WHAT WE DID

Our solution was to develop a device that could accurately distinguish between different types of trail usage and convert that to meaningful data.

How It Works

1. The edge device uses a camera and alwaysAI to process images in real-time.

2. Objects are classified using an ML model and tracked using CV trackers.

3. When an object passes a centerline threshold, it logs the direction, classification, and time.

4. Data is collected offline and sent to AWS for data visualization and BI.

By using alwaysAI we were able to rapidly deploy our ML models directly on the edge device and reduce the complexity of ML development and deployment. Our team was able to focus on the other challenges including improving computer vision and data accuracy.

alwaysAI

aws partner network

Advanced Consulting Partner