productops

ENABLING MOBILITY FLEET MANAGEMENT

Shared Mobility Solution

THE CHALLENGE

Cities are changing at a rapid pace and quickly adopting smart eco-friendly spaces and transportation. Our client wanted develop a new city scooter that greatly improved ride quality and safety as well as a management platform that would support consumer features along side robust fleet management and the capability for 3rd parties to white-label the scooters and the platform.
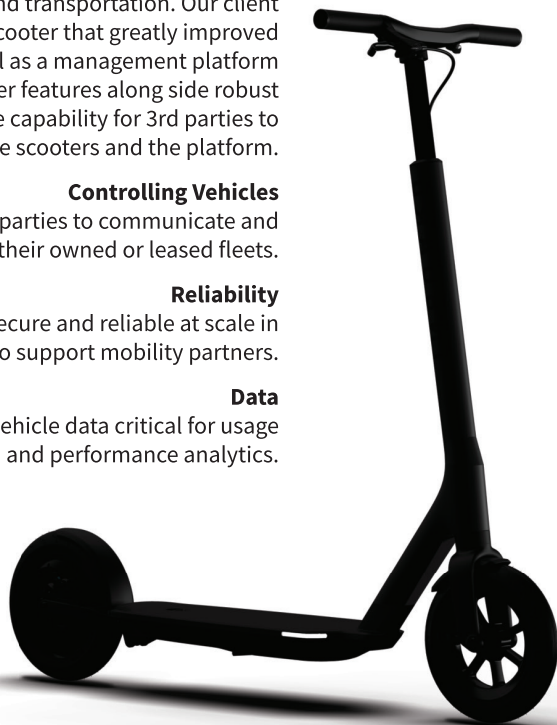
Controlling Vehicles
Core API's that allowed 3rd parties to communicate and control vehicles in their owned or leased fleets.

Reliability
A platform that remained secure and reliable at scale in order to support mobility partners.

Data
Detailed vehicle system and vehicle data critical for usage and performance analytics.

THE SOLUTION

Our client and their Mobility partners know the state of their vehicles at all times. We turned to AWS to provide the backbone of our platform and used AWS services such as API Gateway to securely manage requests, ECS to process messages, and a Parquet database on S3 to store all message transactions in a large data lake. Using AWS, our certified engineers we able to quickly develop, test, and deploy our platform ahead of schedule.

Big Data
Storing a large amount of data was key to allow for system monitoring and business analytics. We created a logging system that stored each message from partners and vehicles in a data lake on AWS. This allows access to all historic operational data.

Scalability & Testing
In order to ensure that the platform could handle vehicle messaging at scale, we created a virtual city where thousands of vehicles would move around the city and simulate the full range of scooter behaviors including errors. We then ran tests using the virtual city and found several vulnerabilities in the architecture. By discovering these early on we were able to modify the platform and created a system that was more reliable, scalable, and ultimately a lot less expensive to run.

Particle

aws partner network
Advanced Consulting Partner