Cygnet Infotech

Intelligent automation helped the USA-based mobility platform provider reduce its operational costs by 30%

COUNTRY
USA

INDUSTRY
Travel & transport

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About Client

The client is a USA-based mobility platform provider aimed at developing a smart parking ecosystem. It empowers daily commuters, space owners, corporates, businesses, commercial establishments, and government by enabling simplified permits and parking, and improvised revenue through its tenant-based system design.

Business Requirement

Design a solution to ensure efficient management of permit, payment, and enforcement activities via a network of parking spot owners, riders, and service providers that form the ecosystem of smart city solutions.
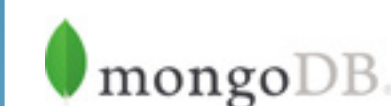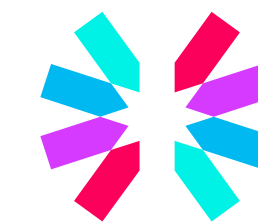
Our Solution

- **Parking management system** - efficient, connected, secured, an all-in-one ecosystem
  - » Tenant-based SaaS System, which can be used by individuals, private offices, government institutions and universities

- **IP360 – Parking violation system**
  - » Developed mobile solution for enforcement agencies to register the spot of violation, type and time of the violation

- **Microservices implemented**
  - » Centers for permit, profile, system, payment, notification, reporting, identity, activity, and console

Tools & Technologies

Key Features

- **AWS services:** Ensured smooth and robust delivery we have utilized various AWS services including CloudFront, Lambda, EKS, ECR, NLP, API Gateway, KMS, SQS, SNS, and SES

- **Microservice architecture:** Helped implement evolutionary-based architecture and make the application extensible and flexible to adapt to the new market requirements

- **Multitenancy:** Single service instance server multiple customers with different data isolation using database per tenant approach

- **Cloud-native architecture:** Ready to scale automatically (horizontally and vertically) during peak loads

- **Hybrid hosting:** Web applications and services hosted on the client's AWS cloud infrastructure where data centers are hosted on tenant's infrastructure

- **Stateless instead of stateful:** Stateless application increased the performance and allowed the system to handle more requests. It also allowed the system to scale horizontally to handle peak or high traffic without any performance impact on the system

- **Adapt open-source platform and libraries:** Open-source platform libraries were adapted to reuse already implemented solutions instead of designing and developing them from the scratch (i.e., Hangfire for job scheduling task, SignalR for real-time notification to web application, etc.)

Business Outcome

Increased revenue recovery by **20%** using automated parking enforcement

Increased efficiency by ease of process and payment collection for individual parking owners

Reduced operational cost by **30%** by automating management of violation tickets

CSI (Customer Satisfaction Index) increased by **20%** by increasing speed of processing at entry/exit point for vehicle owners without long queues

Cygnet Infotech

Established in 2000, Cygnet Infotech works with clients across 35 countries and has a strong team of over 1000 employees. Cygnet Infotech's offerings range from IT Services, Technology Products, and Tax Technology solutions. Aligned with its vision of providing technology enabled business solutions, Cygnet Infotech delivers end-to-end solutions for clients' most pressing business needs.

Cygnet Infotech's Technology Services enables clients to accelerate growth and optimize business operations through, Product Engineering, Bespoke Solutions, IT Modernization, Automation, Implementation Services, Risk Mitigation Services, Information Security & Compliance Services, and IT Staff Augmentation.

Cygnet DIGITAL ENGINEERING SERVICES

Cygnet DES is a partner to clients in the competitive market space and deploys a consultative and customer-centric approach. Its solutions range from standalone bespoke development and managed services to building connected ecosystems across the enterprise and developing smart systems by leveraging emerging technologies like AI, Blockchain, and Hyperautomation.

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