Secure Software Development (CMP020X306) Generated Case Study

Company name

PitSoft

Company profile

PitSoft is a leading provider of innovative technology solutions to the motorsports industry. Founded on the principles of speed and precision, our team of experts combines cutting-edge software development with extensive knowledge of racing regulations and best practices.

Our flagship product, PitSoft Pro, offers real-time data analytics and AI-driven insights to help teams optimize their performance and gain a competitive edge. With seamless integration into existing systems, our solution ensures maximum efficiency and accuracy on the track.

At PitSoft, we are committed to helping motorsports professionals push the boundaries of speed and innovation while prioritizing safety and integrity.

Product

PitSoft Pro

Users

Our flagship product, **PitSoft Pro**, is designed for professional motorsports teams seeking to gain a competitive edge. The software provides real-time data analytics and AI-driven insights that help teams optimize their performance, identify areas of improvement, and make informed decisions.

By using PitSoft Pro, teams can benefit from:

- Enhanced decision-making through actionable insights
- Improved driver performance and safety
- Increased efficiency in pit stops and strategy implementation
- Better data visualization and analysis capabilities

Overall, PitSoft Pro empowers motorsports professionals to drive innovation and success on the track.

System architecture

System Architecture: PitSoft Pro operates on a cloud-based infrastructure to ensure scalability, reliability, and seamless integration with various systems. The architecture consists of:

- **Frontend:** A user-friendly web application built using HTML5, CSS3, and JavaScript for easy access and intuitive interface.
- **Backend:** A robust RESTful API framework (e.g., Node.js) to handle data processing, analytics, and AI-driven insights.
- **Database:** A scalable NoSQL database (e.g., MongoDB) for efficient storage and retrieval of large datasets.
- **Data Ingestion:** Real-time data ingestion from various sources, including sensors, GPS trackers, and telemetry systems via APIs or webhooks.
- **Cloud Infrastructure:** Utilizes a managed cloud service (e.g., AWS or Google Cloud) to ensure high availability, auto-scaling, and disaster recovery.

The system architecture allows for secure communication between components through SSL/TLS encryption, ensuring the integrity and confidentiality of data in transit. This infrastructure enables PitSoft Pro to provide accurate and timely insights to motorsports teams, enabling them to make data-driven decisions and optimize their performance.

Data

Data Types: PitSoft Pro stores various types of data to provide actionable insights and support decision-making. The following are some examples:

- **Driver Performance Data:** Includes metrics such as lap times, speed, acceleration, braking, and cornering performance.
- **Vehicle Telemetry Data:** Covers parameters like engine RPM, gear shifts, throttle position, and brake pressure.
- **GPS Track Data:** Provides location-based data, including latitude, longitude, altitude, and speed.
- **Strategy and Pit Stop Data:** Stores information on pit crew performance, fuel consumption, tire wear, and other relevant metrics.
- **Team Performance Data:** Includes overall team metrics such as average lap times, fastest laps, and qualifying positions.

The product does not store any personal data of customers or staff. All data is anonymous and aggregated to protect user privacy.

Cyber risk appetite

PitSoft has a moderate cyber risk appetite. This means that the company is willing to accept some level of risk while still prioritizing the implementation of appropriate security measures to protect its assets and data. A moderate risk appetite reflects a balanced approach to risk management, where cost-benefit trade-offs are carefully considered.

While PitSoft may not be willing to take on extremely high levels of risk, it also does not aim to eliminate all possible risks. The company's moderate risk appetite is reflected in its decision-making processes and strategic planning,

which prioritize the implementation of effective security controls while balancing these costs with business needs and goals.

Employee awareness of cyber security

The employees at PitSoft have good awareness of cyber security. This is attributed to various factors:

- Regular training sessions: The company provides periodic training sessions on cyber security best practices, which helps employees stay informed about potential threats and how to mitigate them.
- Open communication culture: Employees are encouraged to report any suspicious activities or concerns they may have regarding cyber security to the management team.
- Access to resources: Employees can access relevant information and resources related to cyber security through internal knowledge bases and external websites.

The good awareness of cyber security among employees has been instrumental in maintaining a secure environment at PitSoft. By being vigilant and informed, employees are able to identify potential vulnerabilities and report them promptly, reducing the likelihood of a cyber security breach. This proactive approach has contributed significantly to the company's overall security posture.