

SIT 725

Applied Software Engineering

Task 4.1P

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Ethics Principles

Privacy and User Trust:

This is the basis of Locate a Socket ethics. The application must implement comprehensive data protection methods. Users should have the ability to manage their personal data, including removing and editing information while ensuring secure storage and transmission using industry-standard encryption methods.

Transparency and Fairness:

It is a must for developing user trust on the platform. The system needs to give up-to-date information on availability and price for charging stations, while conveying the degree to which charging station operators are partners with the recommendation stream; otherwise, any advice will be suspect. Treating all charging operators fairly in search results and being neutral to any EV brand will result in unbiased service delivery.

Inclusive Design and Accessibility:

This ensures that the application efficiently serves various audience groups. Compliance with the WCAG 2.1 accessibility standards will ensure that users can use the site despite their disability, and there are many payment options to share with too.

Software Quality Characteristics

System Reliability and Performance:

System reliability and performance are what make a trust of the clients; this is very important. The application should have 99.5% uptime, be available for over 50K concurrent users, must respond within 3 seconds, and it should never be down by failover mechanism. Real-time data accuracy for the availability of charging stations and error handling are very important.

Security and Data Protection:

These requirements include AES-256 encryption for sensitive data storage and the full use of HTTPS for data in transmission. Payment processing is PCI-DSS compatible, and users authenticate using the standard best practices of OAuth 2.0 to ensure security. To address the constantly evolving threats, we should conduct regular security audits and vulnerability assessments to ensure that the integrity of the system is protected.

Maintainability and Futureproofing:

The system should use modular architecture that allows easy updates and feature additions, with comprehensive logging systems and scalable database structures to support long-term growth.