IT-314 Software Engineering

Team 24 **AlgrowBiz**

Functional/Non-Functional Requirements

➢ **Functional Requirements:**

Functional requirements specify the core features of the app, such as processing sales data, generating accurate forecasts, and providing visual insights through dashboards. They ensure the app meets user needs by supporting data filtering, report exporting, and alerting on trends or anomalies. The following are the functional requirements of our project:

- **User Login and Profile Creation:** Allow users to securely log in, create profiles, and manage personalized settings for a customized experience.
- **Records/History**: Maintain a comprehensive log of historical sales data and user activity for reference and analysis.
- **Short-Term Forecasting**: Provide forecasts for short timeframes, such as daily or weekly, to support immediate decision-making.

- **Long-Term Forecasting**: Generate forecasts for extended periods, such as months or years, to aid in strategic planning.

- **Optimal Inventory Management**: Suggest optimal inventory levels based on sales forecasts to minimize costs and avoid overstock or stockouts.

- **Alert and Notification System**: Notify users of significant trends, anomalies, or critical inventory levels through alerts.

- **Feedback**: Allow users to provide feedback on the app's forecasts, interface, and features for continuous improvement.

- **Model Training and Evaluation**: Continuously update and evaluate forecasting models to improve accuracy and adapt to changing data patterns.

➢ **Non Functional Requirements:**

Non-functional requirements ensure the app is secure, reliable, and scalable, providing a smooth user experience with minimal downtime. They support growth, maintainability, and trust by optimizing performance and safeguarding data. The following are the non-functional requirements of our project:

- **Security**: The app must protect sensitive data such as customer information, sales data, and financial

records through encryption, secure authentication mechanisms, and robust access controls.

- **Reliability**: The app should provide accurate forecasts consistently, handle failures gracefully, and ensure data integrity even during disruptions, such as power outages or server crashes.

- **Performance**: The app must process and analyze large datasets quickly, delivering forecasts and insights within a reasonable timeframe, ensuring responsiveness for users.

- **Maintainability:** The app should be designed for easy updates, bug fixes, and feature enhancements, with clean, modular, and well-documented code to support future modifications.

- **Scalability**: The app should handle an increasing number of users or larger datasets without performance degradation, allowing it to grow with the business needs.

- **Availability**: The app should be accessible to users with minimal downtime, offering high uptime and efficient failover mechanisms to maintain continuous service.

- **User-Friendly**: The app must have an intuitive interface, clear visualizations, and simple navigation to ensure users can easily generate, interpret, and act on sales forecasts without extensive training.