To put the design for stock price prediction into transformation, the following steps can be taken:

1. **Implementation Plan:**
   Create a detailed implementation plan outlining the specific tasks, timelines, and resources required to transform the design into a functional system. This plan should consider aspects such as data collection, preprocessing, feature engineering, model selection, training, evaluation, deployment, monitoring, and maintenance.

2. **Data Collection:**
   Implement the data collection process based on the design. This may involve writing code to fetch historical stock prices, trading volumes, news sentiment data, and other relevant information from various sources such as financial APIs or web scraping techniques. However for this, The given data can be used.

3. **Data Preprocessing:**
   Implement the necessary data preprocessing steps as defined in the design. This includes handling missing data, feature selection, feature scaling, and handling categorical data. Write code to automate the preprocessing steps and ensure consistency in data preparation.

4. **Feature Engineering:**
   Implement the feature engineering techniques specified in the design. This may involve creating lagged indicators, calculating technical indicators, performing sentiment analysis, or generating volume-based indicators. Develop code to efficiently generate these features from the collected data.

5. **Model Selection and Training:**
   Implement the chosen model(s) based on the design. This includes setting up the model architecture, defining hyperparameters, and implementing the training algorithm. Train the model using the pre-processed data and evaluate its performance using suitable evaluation metrics.

6. **Hyperparameter Tuning:**
   Implement the hyperparameter tuning process to optimize the model's performance. This may involve using techniques such as grid search or random search to explore different hyperparameter combinations. Write code to automate the hyperparameter tuning process and select the best-performing configuration.

7. **Model Deployment:**
   Implement the model deployment process as outlined in the design. This includes integrating the trained model into a web application, API, or any other platform where users can access the predictions. Develop the necessary infrastructure and code to handle user requests, feed the input data into the model, and return the predictions.

8. **Monitoring and Maintenance:**
   Implement a monitoring system to continuously track the performance of the

deployed model. This can involve setting up alerts for abnormal behaviour or degradation in performance. Develop scripts or tools to periodically retrain the model using new data and address any issues that arise. Ensure that the system remains up-to-date and reliable over time.

9. **Testing and Validation:**
   Perform rigorous testing and validation of the implemented system. Verify that the predictions generated by the deployed model align with expected outcomes. Conduct thorough testing to identify and fix any potential bugs or issues.

10. **Documentation and User Guides:**
    Create comprehensive documentation and user guides to explain the system's functionality, usage, and limitations. Include details about data sources, preprocessing steps, feature engineering techniques, model architecture, and deployment instructions. This documentation will aid in system maintenance, future enhancements, and user support.

11. **Deployment and Rollout:**
    Deploy the transformed system into the production environment following the implementation plan. Monitor the deployment process to ensure a smooth transition from development to production. Collaborate with stakeholders and users to gather feedback and address any concerns or improvements needed.

12. **Ongoing Improvement:**
    Continuous improvement is crucial for the effectiveness of the stock price prediction system. Analyse user feedback, monitor model performance, and stay updated with the latest advancements in the field. Incorporate improvements, update models, and iterate on the system to enhance accuracy and reliability.

By following these steps, the design for the stock price prediction system can be effectively transformed into a functional and deployable solution.