



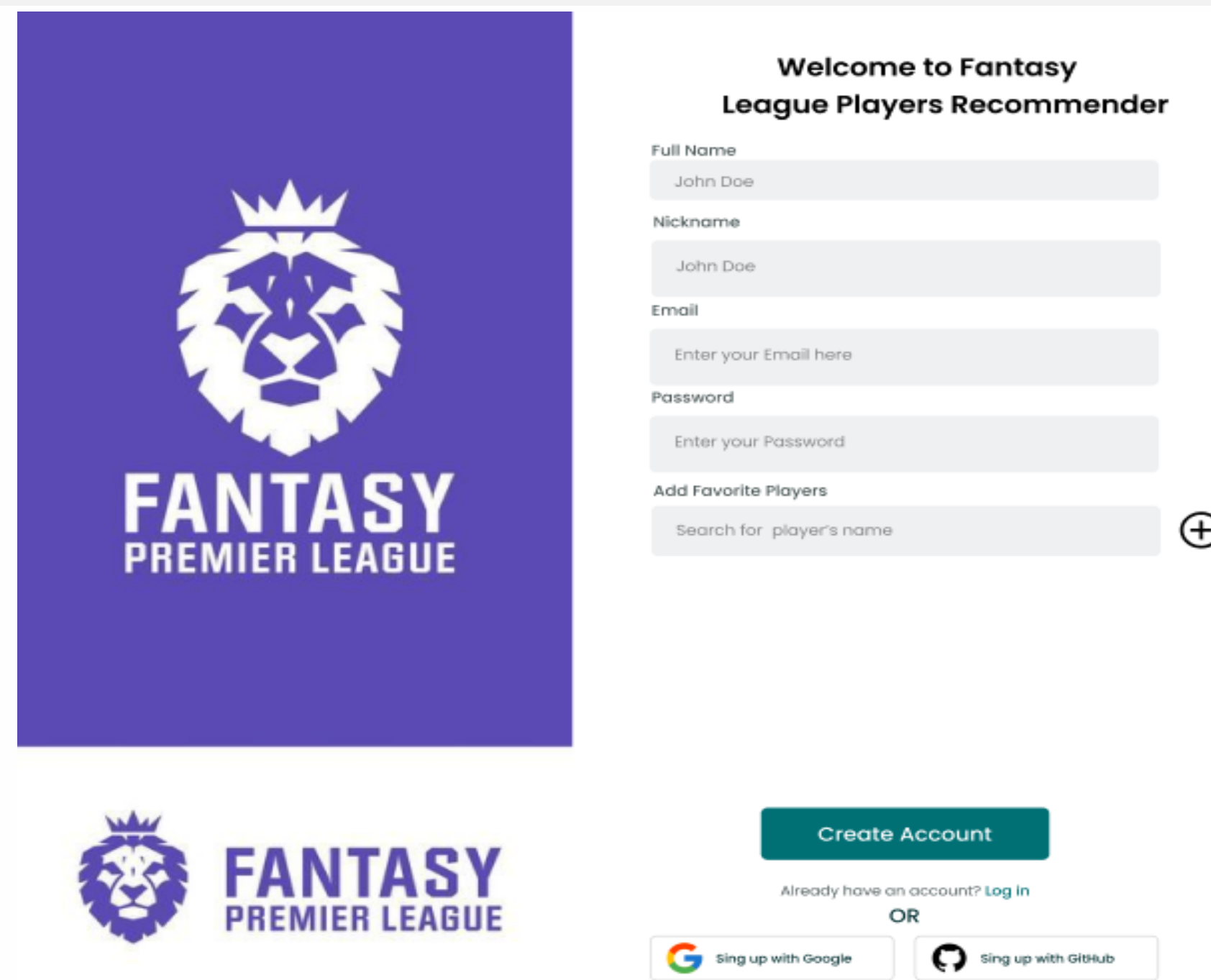
# "EPL Fantasy Football: Data-Driven Recommender System"

## 1. Background

Fantasy Football players form virtual teams with real-life EPL athletes, earning points based on actual performance. To address the market gap in data-driven recommender systems, this project develops a system utilizing time series forecasting and historical data to enhance users' in-game performance through tailored recommendations.

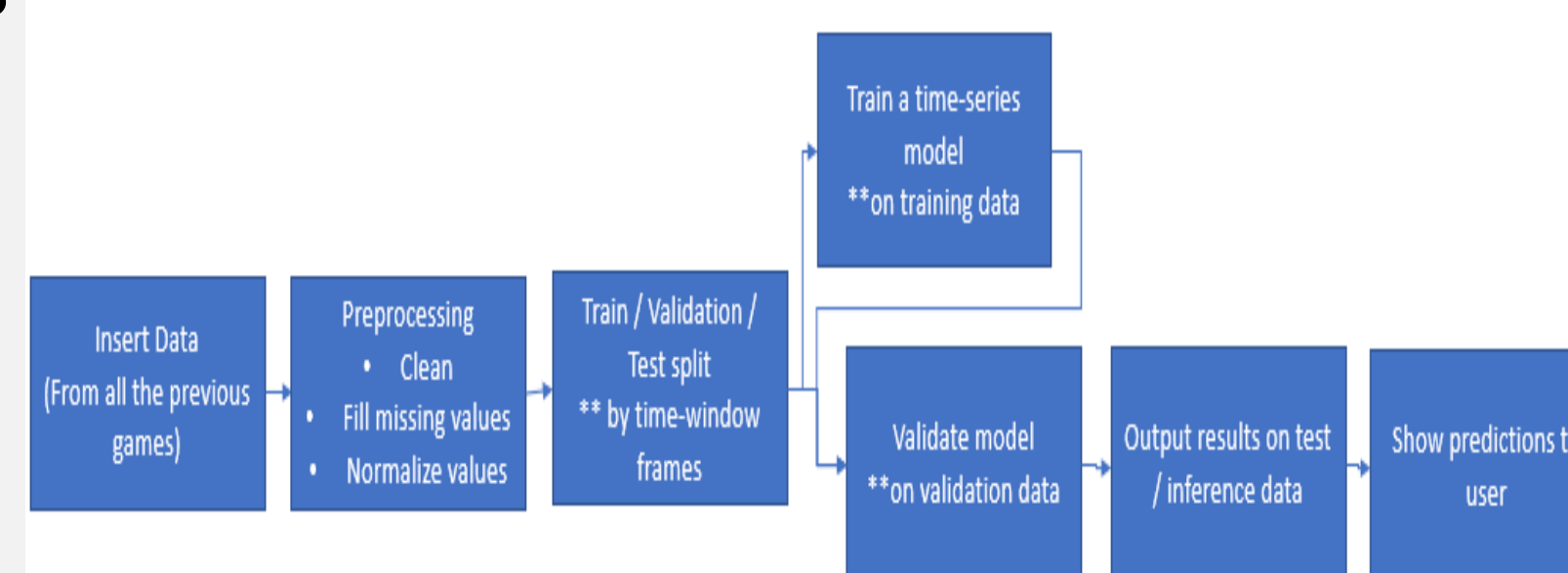
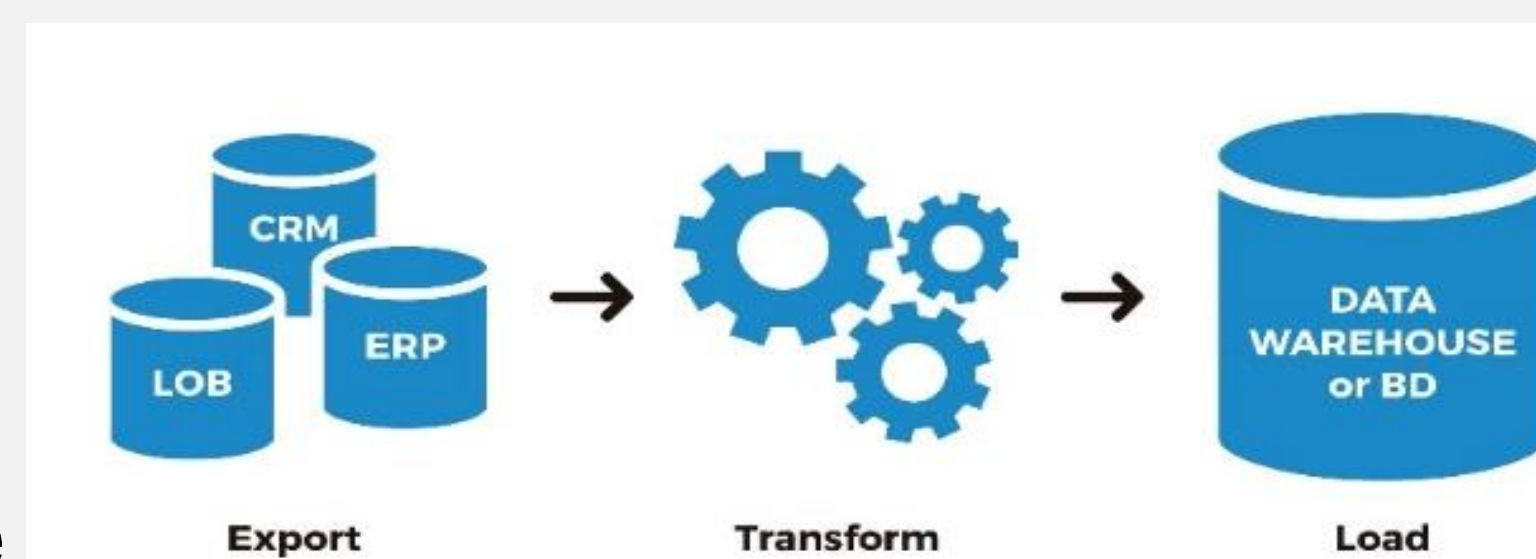
## 2. Objective

Develop an efficient recommender system for EPL Fantasy Football using historical data and time series forecasting to provide data-driven squad recommendations, improving user experience and in-game performance.



## 3. Methods

- 1.Data Collection & Pre-processing: Acquired and cleaned historical player, team, and match data.
- 2.Time Series Forecasting: Applied techniques like ARIMA or LSTM to predict player performances.
- 3.Feature Engineering: Extracted relevant features affecting Fantasy Football success.
- 4.Recommender System: Developed a system generating personalized squad recommendations.
- 5.Evaluation & Optimization: Assessed and refined the recommender system for improved performance.



## 4. Results

A prototype was developed with two algorithms to solve the market gap in data-driven recommender systems for English Premier League Fantasy Football. The system includes a user registration screen, player stats screen, and train screen. The database is saved in CSV files, and the ETL process consists of three stages - Extract, Transform, Load. The project met its goal of developing a recommendation system for assembling players for the Fantasy League game based on machine learning algorithms. Future development includes implementing a database management system and expanding the system to include more seasons of data.



## 5. Summary and conclusions

The project aimed to develop a prototype for a recommender system for the English Premier League Fantasy Football. Through a literature survey, the project identified the necessary concepts and algorithms for processing the available data. The selected systemic alternative involved adapting open-source code to develop a recommendation algorithm. The prototype includes a user registration screen, a player stats screen, a train screen, and a next game week screen. The system is built on a data entry stage and a time series configuration. The data is saved in CSV files, and the ETL process consists of three stages - Extract, Transform, and Load. The project met its goal of developing a prototype, and future development includes using a database and improving the algorithms.

