StockGenie Application Interactions

Client	Admin	System	Database	PredictionAPI	EmailService

Sign Up / Sign In Process

Client → System: Enter email and password

System → Database: Check if email exists

Database ⇢ System: Email availability status

System ⇢ Client: Prompt for email verification (if new) or authentication (if existing)

Client → EmailService: Verify email (new users) or Reset password (forgot password)

EmailService → Client: Email verification link or Password reset instructions

Client and Admin Shared Features

Client → System: Search for stocks

System → Database: Fetch stock data

Database ⇢ System: Stock details

System ⇢ Client: Display stock data with graphs

Client → System: Add stock to wishlist

System → Database: Update wishlist

Database ⇢ System: Confirmation

System ⇢ Client: Wishlist updated

Admin Exclusive Features

Admin → System: Access admin page

System → Database: Fetch all users, error logs

Database ⇢ System: Users and logs data

System ⇢ Admin: Display admin view

Admin → System: Update market holidays, featured stocks

System → Database: Update settings

Database ⇢ System: Confirmation

System ⇢ Admin: Admin settings updated

Stock Prediction and Portfolio Management

Client → System: Request stock prediction (1-90 days)

System → PredictionAPI: Fetch prediction data

PredictionAPI ⇢ System: Prediction results

System ⇢ Client: Display prediction on graph

Client → System: Add stock to portfolio

System → Database: Update portfolio

Database ⇢ System: Portfolio updated

System ⇢ Client: Portfolio display with investment graph

Downloading CSV

Client → System: Request CSV of stock price history

System → Database: Fetch price history

Database ⇢ System: CSV data

System ⇢ Client: Download CSV file

Interaction with external APIs for email and predictions enhances functionality.