Here's an algorithm for searching for a specific user and updating their information:

1. Start the algorithm.
2. Input the user ID you want to search for.
3. Connect to the database or data source where user information is stored.
4. Search for the user ID in the database.
5. Check if the user with the provided ID exists.
6. If the user exists, retrieve and display their current information.
7. Input the updated information for the user (e.g., name, email, etc.).
8. Update the user's information in the database with the provided data.
9. Verify that the update was successful.
10. If the update was successful, display a success message indicating that the user information has been updated.
11. If the update was not successful (e.g., due to database errors or invalid data), display an error message and handle the issue appropriately.
12. End the algorithm.