Heuristic Evaluation of ReUnite

1. Problem/Prototype
Reunite is an app that helps users maintain old friendships by alerting them when their friends are in the area and facilitating the meet-up process.

2. Violations Found

1. **H1 - Visibility of system status** / Severity 3 / Found by: A, B, D
   After reaching out to someone, there is no acknowledgement that the proposed time has been sent to them. The screen just redirects to the Events tab, which only shows your already confirmed events.
   **Fix:** The screen could display a message like “Reached out to X. Awaiting response.” There could also be a place to view pending invitations at the top of the screen.

2. **H4 - Consistency and standards** / Severity 2 / Found by: A, D
   The wording of buttons “Reach Out” and “Message” is a bit confusing and users may wonder what the difference is since messaging is a form of reaching out.
   **Fix:** Reaching out (proposing a time) and messaging (sending a text message) could be integrated into just one function, perhaps under the label “Reach out.” It seems strange to be able to send someone just a time and no message.

3. **H5 - Error prevention** / Severity 1 / Found by: A
   It only takes one click on the “x” to remove an alert for the screen, which could easily be done by accident. After clicking the x, there is no way to recover the alert.
   **Fix:** Perhaps make it take two clicks instead of one to remove the alert (e.g. swipe the alert to the left, then click on a trash icon) so it’s harder for users to accidentally remove it, and/or have a way to view past alerts.

4. **H5 - Error prevention** / Severity 3 / Found by: A, B, D
   After clicking “Cancel” on the Events screen, which is right next to the “Message” button, the event to meet your friend immediately disappears with no way to recover it.
   **Fix:** It would be useful to have a confirmation box pop up asking if you are sure you want to cancel since cancelling on a friend is pretty high-stakes. Or perhaps there should not even be a cancel button here, just the message button. When a user clicks message, the chat could have options to reschedule or cancel. This would make it harder to accidentally cancel on someone and also give them a chance to explain why they are cancelling. It seems weird that it’s so easy to cancel on someone without first communicating with them.

5. **H3 - User control and freedom** / Severity 3 / Found by: A
   Finding a particular message involves clicking on someone's profile and then clicking “Message,” and if the user wanted to look at another message thread, it would take many clicks to go back, click on another friend’s profile, and click “Message.”
   **Fix:** Add a messages tab in the bottom navigation bar where a user can view all their messages.

6. **H8 - Aesthetic and minimalist design** / Severity 1 / Found by: A
The use of exclamation marks in the text (X is in your area! Y updated her travel plans! A is traveling to B!) was a bit excessive and distracting.

**Fix:** Since exclamation points are used to indicate emphasis or excitement, I would suggest using them sparingly (or not at all) so as to not desensitize or overwhelm the user.

7. **H4 - Consistency and standards / Severity 2 / Found by: A**

In the alerts, the information displayed for someone who is in your area versus someone who updated their travel plans could be made consistent. Right now, the alerts are different: “A is in your area (X miles away)” versus “B updated her travel plans! Traveling to [city], [date].”

**Fix:** For person A, I would suggest using city name instead of distance in miles away. Especially since the friend is close by, city name is more helpful than distance in miles. It would also be helpful to add dates for when person A is in the area to this screen so no extra clicking is required.

8. **H4 - Consistency and standards / Severity 2 / Found by: A**

The meaning of “Location” on a user’s profile is ambiguous; it is not clear if that’s the user’s current physical location or their “home base.”

**Fix:** Change the wording to “Home” if that’s the intention.

9. **H8 - Aesthetic and minimalist design / Severity 1 / Found by: A**

The design of the screens is perhaps too minimal and seems to lack a consistent frame. Other than the Friends screen, none of the other screens have headings at the top of the screen.

**Fix:** On a user’s profile, I would consider making their name the heading of the screen. On the home page, consider having the app’s name at the top of the screen to give it more of a homepage feeling and a brand presence and so that the spacing of the main content remains consistent across screens.

10. **H6 - Recognition rather than recall / Severity 2 / Found by: A, C**

The home screen button in the navigation bar could be made more intuitive. The Reunite “r” logo is not really indicative of the functionality of the home screen. This violates the recognition not recall heuristic, because it requires the user to remember what the function of each button is.

**Fix:** It might make more sense if the home screen was a home icon or map pin icon, and the logo or full app name was placed at the top of the home screen.

11. **H8 - Aesthetic and minimalist design / Severity 1 / Found by: A, D**

The email field in the profile does not seem necessary since it seems unlikely that friends will need to email each other, especially given the messaging functionality in the app.

**Fix:** Removing the email field could make the profile screen less cluttered.

12. **H8 - Aesthetic and minimalist design / Severity 1 / Found by: A**

The blue border around each profile picture makes it look like there’s some additional information attached to that person with a blue border (similar to Instagram stories), so a user might wonder if the border means the picture is clickable and expect some profiles to have borders but others not to.

**Fix:** Remove the profile picture borders for a more minimal and potentially less misleading design.

13. **H8 - Aesthetic and minimalist design / Severity 1 / Found by: A, B**
The two large “Edit profile” and “Settings” buttons right in the middle of the profile screen take up a lot of space (the entire width of the screen) and disrupt the flow of the screen.

Fix: I would consider using a gear icon for the settings button and placing it at the top right corner of the screen. The “Edit profile” button could remain, or consider placing a pencil icon next to the user’s name.

14. **H4 - Consistency and standards** / Severity 1 / Found by: A
   
   The placement of the “Done” button when editing a user’s profile does not align with users’ expectations for where a done button would be.
   
   Fix: Generally, the done button would be at the upper right corner of the screen.

15. **H7 - Flexibility and efficiency of use** / Severity 3 / Found by: A, D
   
   Currently, there is no easy, formatted way to tell the time or location of a scheduled event without clicking message and then scrolling through the messages.
   
   Fix: For each scheduled event, in addition to the date, also include the time and location in case a user has multiple events on the same day.

16. **H3 - User Control and freedom** / Severity 4 / Found by: A, B, C, D
   
   On the reach out screen where the user picks potential times to meet, the screen immediately switches after the user clicks one time. It does not give users the chance to select multiple times or to look over their selection before sending them.
   
   Fix: Allow users to select multiple times. At the bottom of the screen, have a “Done” or “Confirm” button to prevent users from accidentally clicking the wrong time.

17. **H5 - Error Prevention** / Severity 2 / Found by: B, D
   
   The “reach out” and “message” tabs on a user’s friend’s profile are in the same visual position as the “edit profile” and “settings” tabs on the user’s profile screen. This violates the error prevention heuristic because the user may become confused as to which screen they’re on. Additionally, they might accidentally “reach out” instead of “edit profile” due to this.
   
   Fix: Reposition these buttons on either screen, and/or to differentiate the buttons by making them a different shape.

18. **H4 - Consistency & Standards** / Severity 2 / Found by: C
   
   On the profile screen, “location” is shown to be editable at all times, unlike email, phone, and travel plans. Upon clicking the “edit profile” button, nothing changes. This violates the consistency and standards heuristic because this may confuse users; for example, does changing location when the profile is not in “edit mode” change the location in the same way that it would if the profile was in “edit mode?”
   
   Fix: Put email and phone on a separate screen, as they need to be modified less, and leaving location and travel plans editable at all times. Even better, the location could be displayed right beneath the name of the person, and your app could ask for location access, so the user doesn’t have to worry about it at all.

19. **H7 - Flexibility & Efficiency of Use** / Severity 3 / Found by: C
   
   After reaching out, and under the “pick some times that you’d like to meet” screen, the user is only presented with one-hour time slots. This violates the flexibility and efficiency of use heuristic, because the user may want to schedule a different amount of time than a one hour period.
Fix: Show the other user’s calendar of availability, and, using a When2Meet-like UI, allow the user to book an amount of time, limited to some max preset by the profile’s owner.

20. **H1 - Visibility of System Status** / Severity 3 / Found by: C

Upon clicking “edit profile” on the user profile screen, the line “Enter a travel plan” subtly appears at the bottom of the screen. Not only is this non-obvious when the line is visible, consider the instance when there are more travel plans such that not all of them can be listed on the screen — in that case, the “Enter a travel plan” line will not be present (it will require the user to scroll down the page), thus making it even more non-obvious what the system status is. This violates the visibility of system status heuristic, because even though there are some indicators that the system state is in “edit profile mode” (such as the “done” button and underlined text fields), overall, it remains difficult to notice if the user is not very attentive.

**Fix:** More clearly signify that the text fields and image can be modified (e.g. text boxes and a “edit” button on top of the profile photo).

21. **H5 - Error Prevention** / Severity 4 / Found by: C

While in “edit profile” mode, one can enter a new travel plan. However, the user enters this travel plan in free-text, so they could make errors, and not format it in a useful or consistent way. This violates the error prevention heuristic because it creates an error-prone condition.

**Fix:** Adding structured input fields for the date and the location, along with examples.

22. **H5 - Error Prevention** / Severity 3 / Found by: C

Under the user profile, the user’s travel plans simply indicate a date (i.e. May 3 or May 8), along with a location. There is no indication of date range, like there is on the “r” tab, where one profile indicates that they will be traveling to Palo Alto, CA from March 31 to April 4. This violates the error prevention heuristic because it makes the assumption that the user will indicate every travel plan they have on the app. For example, the app assumes that Tyler will be in Palo Alto from May 3rd to May 8th. However, what if Tyler is going to LA on May 5th, but decided that he didn’t want people to know, so he didn’t input it in his travel plans?

**Fix:** Rearrange the user input, such that a user could input the date range of travel, along with the location. A good analogue to this could be something akin to Kayak or Google Flights.

23. **H7 - Flexibility and Efficiency of Use** / Severity 2 / Found by: C

The user has no easy way to turn off location access for the app. Although there is a button for “privacy” under “settings” in the user profile tab, it is unclear whether such a page would contain a location access toggle, and even if so, it is too many clicks away for the user. For power users and regular users alike, this is a serious privacy concern. This violates the flexibility and efficiency of use heuristic because we want users to be able to tailor frequent interactions, and the ability for a user to choose when and when not to share feels like a fairly important and frequent activity.

**Fix:** Offer an obvious “share my location” toggle under the user’s profile that would allow for a switch between sharing and non-sharing modes. An analogue to this is Find my Friends, which demonstrates similar functionality.

24. **H4 - Consistency and Standards** / Severity 2 / Found by: C

On the “friends” tab, there are three friends listed from three different locations — Irvine, CA, Menlo Park, CA, and Sydney, Australia. However, although Irvine, Menlo Park, and Sydney are all cities, CA and Australia are different entities — one is a state (and abbreviated), and the
other is a country (and not abbreviated). This violates the consistency and standards heuristic, because for a person in China, for example, may not know what “CA” stands for. It's important to keep these terms consistent across locations.

**Fix:** Indicate country for all the people, or at least to consider location context (and indicate country and spell out the state) for an individual outside of the United States.

25. **H8 - Aesthetic and Minimalist Design** / Severity 1 / Found by: C

On the “friends” tab, the header for “Friends” is very small, and of the same text size as the names of the friends listed under the search bar. Additionally the “add friend” symbol is disproportionately big. Although not an “irrelevant” UI element, this violates the heuristic of aesthetic and minimalist design, as the proportions of both the header and the icon are so misscaled that it distracts from other elements of the screen.

**Fix:** to significantly increase the side of the “friends” header and decrease the side of the “add friend” button.

26. **H10 - Help and Documentation** / Severity 2 / Found by: C

There was no clear help and documentation as to how to use the features in the app. For example, when you add a friend, does the other person have to accept your request, or is it automatically populated? And if they have to accept your request, where are those “pending” invites held? This violates the help and documentation heuristic because it is unclear to the user how this functionality works, and there are no easy ways for the user to figure it out.

**Fix:** include an info button, or clearly lay out in the UI how that process would work.

27. **H6 - Recognition not Recall** / Severity 3 / Found by: C

On the “events” tab on the home page, the user is presented with meetups. On those meetups, the user is given two options — to message or cancel, along with a date. However, there is no mention or reminder of the time of the meeting. This violates the recognition not recall heuristic because the user must remember when they put in the meeting time for.

**Fix:** Integrate with Apple/Google calendars, and to add a timestamp to the event alert.

28. **H4 - Consistency and Standards** / Severity 4 / Found by: C

On the “r” screen, for the first notification, we are given that Ricky is in the area, and five miles away. However, there is no indication that this is a new notification (there is no timestamp), so it may be unclear when they were five miles away, or for how long. And another question that arises is: are we only notified within a five mile radius? This violates the consistency and standards heuristic because there is no clear standard for when to notify the person, and when notified, there is no standard for when to remove the notification or to indicate that it is new or old.

**Fix:** timestamp and the ability to set a radius for notification.

29. **H6 - Recognition rather than recall** / Severity 2 / Found by: B

Upon clicking on/swiping the notification that Ricky is in the area, I am taken to the list of alerts. This is as if iMessage took me to my overall iMessage inbox rather than to the message I swiped into.

**Fix:** swiping into the notification should take me directly to Ricky’s page.

30. **H3 - User control and freedom** / Severity 2 / Found by: B

On Ricky’s page, it's not obvious how I can go back into alerts if I want to.

**Fix:** add a back button here.
31. **H2 Match between system and real world** / Severity 2 / Found by: B
   “Events” to me says “things I can sign up for/go to” like Facebook events. Since this doesn’t have a real calendar app functionality, I don’t expect it to be things I’ve already agreed to.
   **Fix**: a better word might be “Plans”.

32. **H1 Visibility of system status** / Severity 3 / Found by: B, D
   After I have cancelled plans, there’s no acknowledgment of that fact.
   **Fix**: add a popup with “Plans cancelled. Maybe next time…” or something

33. **H3 User control and freedom** / Severity 2 / Found by: B
   The back button on the select times page returns you to alerts, not to the page you actually came from (in my case, Ricky’s page).
   **Fix**: change the targeting of the back button.

34. **H4 Consistency and standards** / Severity 2 / Found by: B, D
   Is this two tabs or a set of buttons? You’ve got it doing three different things in two different colorings in three different places.
   **Fix**: standardize these.
35. **H2 - Match between system and the real world** / Severity 2 / Found by: B
   For the travel plans feature, I don’t know anything about the trip or why it’s happening — it’s very different if my friend is going to be in SF for two days for training or just for vacation.
   **Fix:** add some indicator of the nature of the trip (even just free time yes/no)

36. **H6 - Recognition rather than recall** / Severity 3 / Found by: D
   In the page where you pick times to meet, after “reaching out” with a person, there is no information of who is picked. This violates H6 because users should not have to remember information in previous screens. Since there is no name of the person, users may forget who they picked to “reach out” to.
   **Fix:** Display the name and picture (optional) of the person at the top of the screen.

37. **H3 - User control and freedom** / Severity 3 / Found by: D
   Currently, after reaching out to the person, it moves to a screen where it is assumed that both parties have accepted the meeting and are now choosing times to possibly meet. Because of this, however, it violates H3 because the user is not able to cancel their original “reach out” especially if this was an accident and “undo” the action.
   **Fix:** Add the ability to cancel the “reach out” to a friend

38. **H3 - User control and freedom** / Severity 4 / Found by: D
   After picking meeting times, there is no way to edit this after sending. This violates H3 as if something pops up for the user or forgets that they can’t meet at a specific time that they picked, it cannot be changed aside from sending the whole form again.
   **Fix:** Add the ability to edit meeting times in events tab
## 3. Summary of Violations

<table>
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<tr>
<th>Category</th>
<th># Viol. (sev 0)</th>
<th># Viol. (sev 1)</th>
<th># Viol. (sev 2)</th>
<th># Viol. (sev 3)</th>
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4. Evaluation Statistics

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<th>Evaluator B</th>
<th>Evaluator C</th>
<th>Evaluator D</th>
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*Note that the bottom rows are not calculated by adding the numbers above it.*

5. Summary Recommendations

Reunite's UI was generally successful in allowing me to find out which friends are in the area, learn when friends will be visiting, and make plans to meet with friends. That said, there were limitations to the user interface design that restricted my ability to properly carry out these tasks in all instances. Two larger trends across the violations I found were: gaps in error prevention, and a lack of consistency and standards. Many of the issues related to error prevention could be remedied by more closely analyzing the user flow through the app. Consistency and standards could also be improved through further user interviews and creating unified app assets. Additionally, although this wasn’t necessarily noted in the list of heuristics, it may be worth, per Landay’s lecture on vision and cognition, to avoid the use of blue as the primary color for the app (and especially, avoiding the use of blue for text).

Additionally, you may want to rethink the look of your notifications/alerts screen. Your app’s primary value-add is the way that I get notifications of my friends, helping me make plans with them — if I really only get one notification a day (at most — how often does an old friend come to town?) and the main options to interact with an alert are to enter their profile or delete the alert, that alert screen is gonna look pretty sad and empty. I would push for you to consider something to up the number of alerts you get per day, maybe by using closer friends and alerting only when they’re literally a few hundred feet away (I know I’d find that helpful; I sometimes find that I’ve accidentally eaten lunch fifty feet away from a friend and we just didn’t notice each other until we were leaving). It could be the same interface, just with an added function for friends who already live fairly close.

I’m not completely sold on the idea of the home screen essentially being a notifications page (Alerts). Perhaps “Alerts” could be reframed as a “feed” of some sorts. I understand your rationale of combining the alerts and events tabs from your low-fi prototype to make the medium-fi more minimal. However, it seems inconvenient to rely on the bottom three buttons to navigate to home, just to have to go back up to a separate bar at the top to navigate again between alerts and events. Since “Alerts” and “Events” seem to be pretty sparse (though this will depend on how you decide to
have users add friends), perhaps they could be combined into one single screen/feed (e.g. list of upcoming events collapsed at the top of the screen, with just the soonest one showing, followed by a scrollable “feed” with updates from all your friends).

The friends tab, which lists all your friends along with their hometowns, does not seem to serve much purpose as of right now, unless you are searching for a specific friend. Instead of hometown, it could be useful to list location and upcoming travel dates for all friends (even if they aren’t near you, so this screen could be something users would be interested in browsing just for fun). Perhaps they could be sorted by their distance to you. It seems more valuable to display information about their travel plans than about their hometowns, which you probably already know if you’re friends with them.

Beyond heuristic evaluations, there are a couple of recommendations that I think can improve the prototype further. This recommendation came from the violation of H8 because I believe that some information, such as, phone number and email aren’t necessary. I think location and travel plans should stay, but I think other features you could add is the ability to group friends or add custom labels to them. I thought of this because in the concept video, there are long lost friends reuniting. I believe by adding custom labels, you can allow your users to remember their friends easier, but also by grouping them, you can set privacy settings to who you want to get notified by or notify.

Another recommendation would be the ability to customize your mile range of how far you want to be notified. I’m assuming right now you would only be notified if your location is set to Palo Alto and a friend goes to or is travelling to Palo Alto because the notifications received are within a small distance of 5 miles. I think you can allow your users to customize, the range to which they would like to be notified so that people with their location of Palo Alto could possibly notified by anyone in the Bay Area, instead of just Palo Alto.

Lastly, I was also confused by the ability to pick times when meeting with a friend. Both users are able to pick times that they are free to meet, but how will the app choose what time is best for both? I think you could add a ranking system so that people can select their preferred times rather than just available times. This would be better as the users wouldn’t have to message each other on what times they want to meet based on their similar times and would make the overall experience for the user simpler.

Incidentally, I think it would be worth considering how comparables (e.g. Find my Friends) deliver value, and how we can capture positive UI/UX elements from a service like that (such as a map feature). Overall, this is an app with significant potential, and I’m excited to see where things go from here!
Severity Ratings

0 - don’t agree that this is a usability problem
1 - cosmetic problem
2 - minor usability problem
3 - major usability problem; important to fix
4 - usability catastrophe; imperative to fix
Heuristics

H1: Visibility of System Status
   ● Keep users informed about what is going on

H2: Match Between System & Real World
   ● Speak the users’ language
   ● Follow real world conventions

H3: User Control & Freedom
   ● “Exits” for mistaken choices, undo, redo
   ● Don’t force down fixed paths

H4: Consistency & Standards

H5: Error Prevention

H6: Recognition Rather Than Recall
   ● Make objects, actions, options, & directions visible or easily retrievable

H7: Flexibility & Efficiency of Use
   ● Accelerators for experts (e.g., gestures, kb shortcuts)
   ● Allow users to tailor frequent actions (e.g., macros)

H8: Aesthetic & Minimalist Design
   ● No irrelevant information in dialogues

H9: Help Users Recognize, Diagnose, & Recover from Errors
   ● Error messages in plain language
   ● Precisely indicate the problem
   ● Constructively suggest a solution

H10: Help & Documentation
   ● Easy to search
   ● Focused on the user’s task
   ● List concrete steps to carry out
   ● Not too large