Design Workshop

Human-AI Interaction

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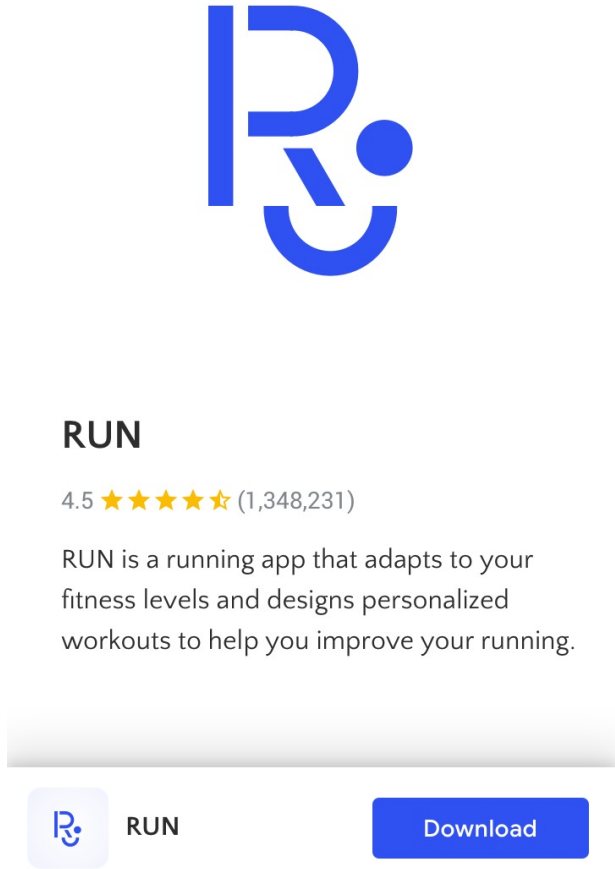
POLITECNICO DI TORINO

Academic Year 2021/2022

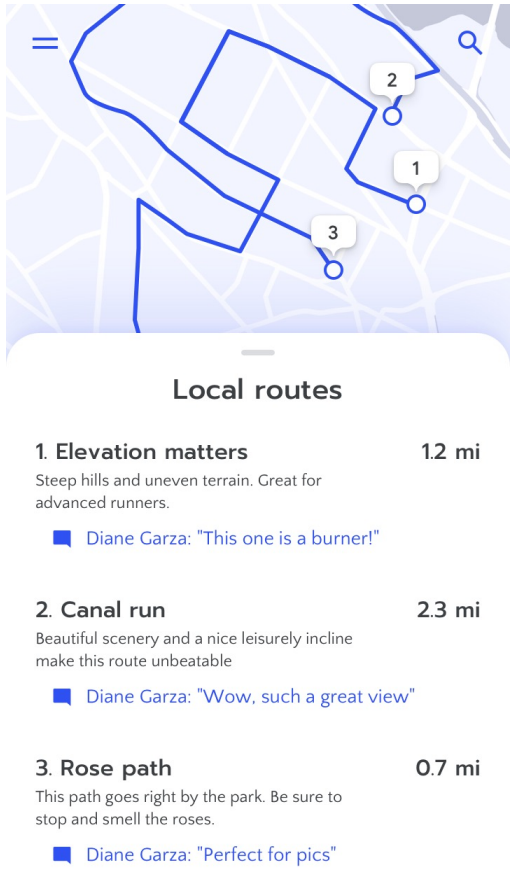
e-Lite

Introducing the RUN app…

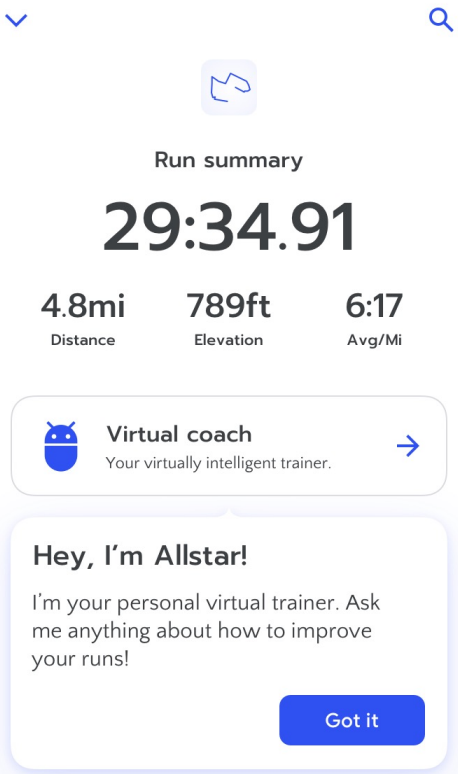
- RUN is a (fictional) mobile app for helping people in their running activities
  - AI included!
  - screenshots from https://pair.withgoogle.com



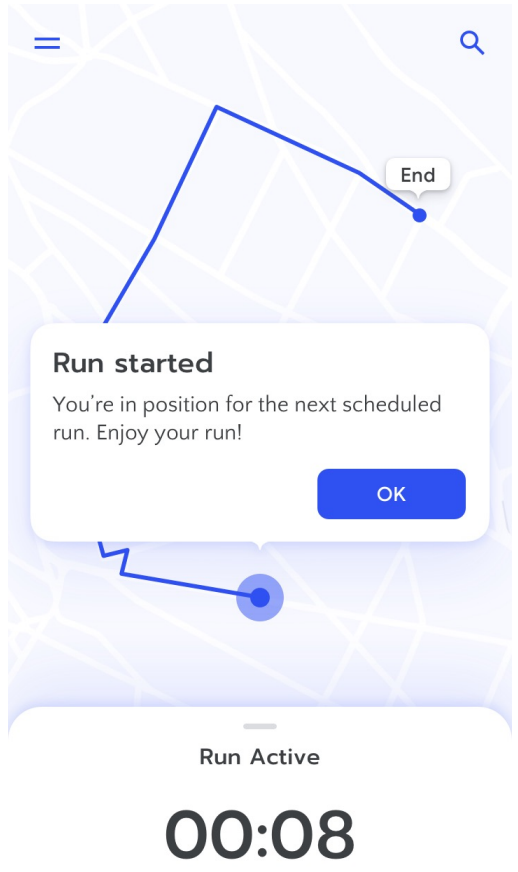
Three Main Features



Suggesting Routes

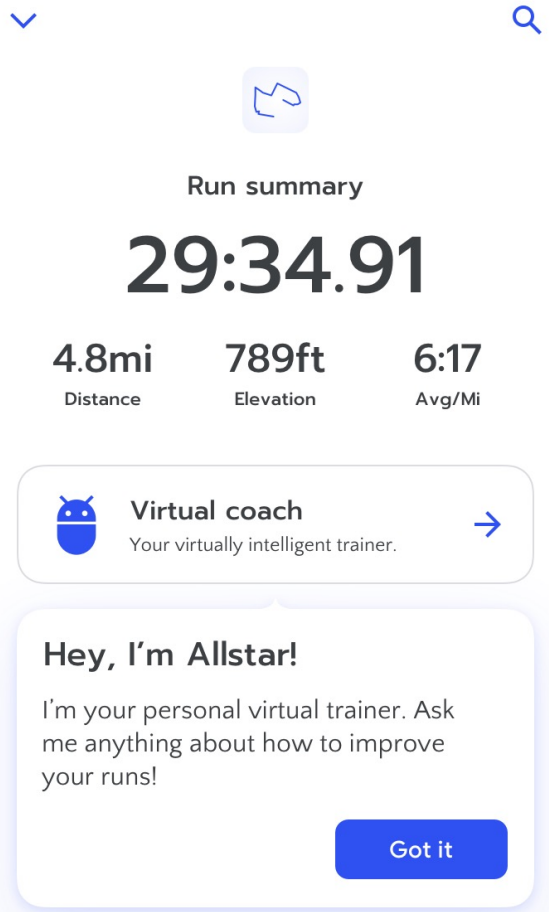


AI Coach (vocal, too)



Tracking Runs

Activity 1: Mental Models



The "Virtual coach" is there to help, to improve people's runs.

- How might users think this works?
- When might it work better?
- When might it work more poorly?

Use the next 2 slides to answer, as a group

Activity 1: Mental Models

Who are the users you have in mind?

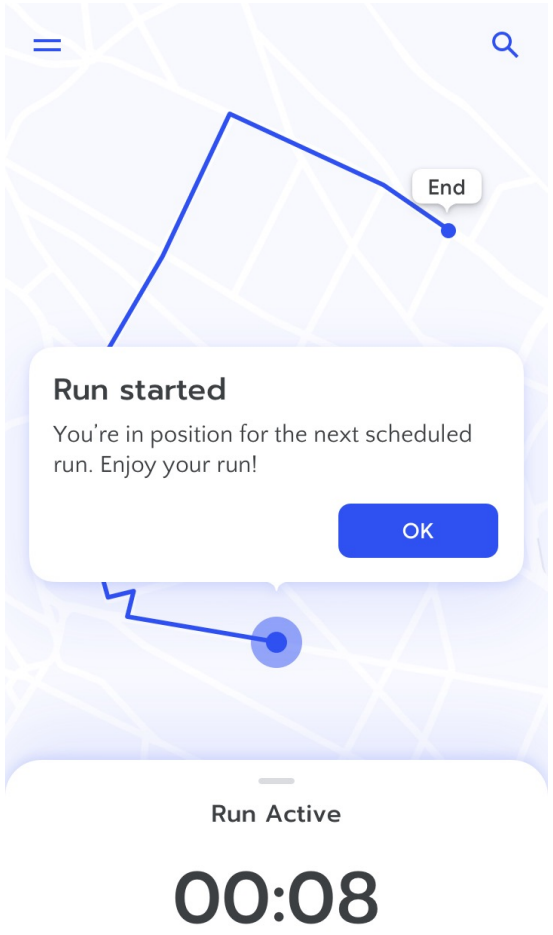
According to this group of users, how does the feature work?

Activity 1: Mental Models

According to this group of users, when it might work better?

…when it might work poorly? What can be changed in the app to compensate?

Activity 2: Errors and Failures



The "Run" app automatically start tracking a run once it detects contextual information.

- What happens when the prediction is wrong?
- How can the app recover from this?

Use the next 2 slides to answer, as a group

Activity 2: Errors and Failures

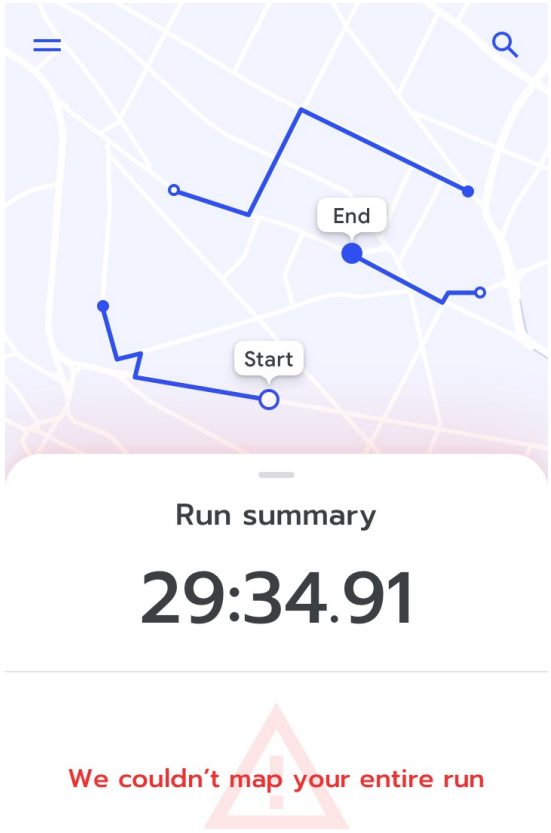
What is a way this feature could fail with low/no consequences?

What is a way this feature could fail with large negative consequences?

Activity 2: Errors and Failures

What technical and/or human methods may mitigate these failures/recover from them?

Activity 3: Errors and Failures

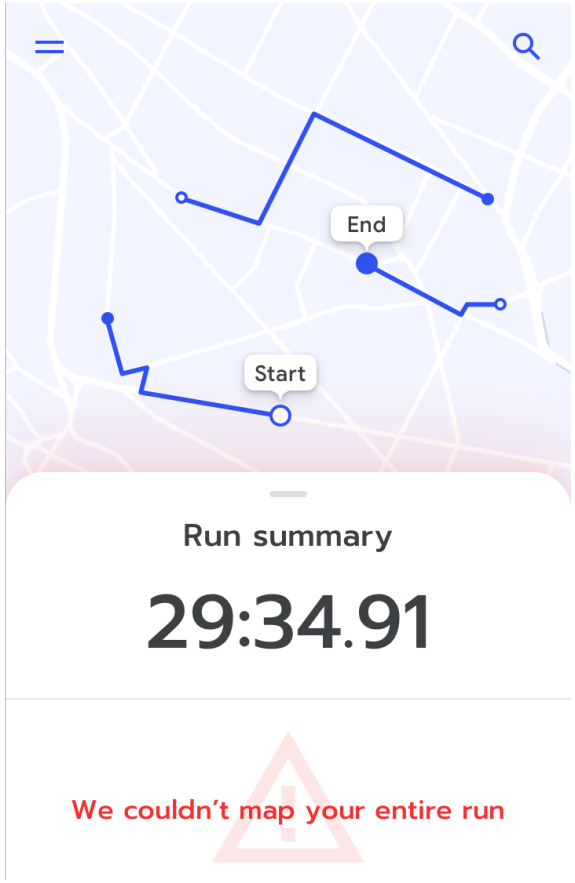


After a run, it may happen that the app is not able to track the entire path…

- How can we change the app design to handle this case?

Use the next slide to answer, as a group

Activity 3: Errors and Failures



Original Design

Improved Design

Activity 4: Guidelines

- Use the Guidelines for Human-AI Interaction on the previous three screenshots
  - https://www.microsoft.com/en-us/haxtoolkit/library/
- How many "issues" are you able to identify?
- How many guidelines is the app respecting?
- Do you spot any other problems?
  - suggestion: the phone owner is not called Diane Garza

Use the next slides to answer, as a group

Activity 4: Guidelines

AI Design Guidelines	Violation/Everything ok? Where? [A Guideline may not apply]
G1 - Make clear what the system can do	
G2 - Make clear how well the system can do what it can do	
G3 - Time services based on context	
G4 - Show contextually relevant information	
G5 - Match relevant social norms	

Activity 4: Guidelines

AI Design Guidelines	Violation/Everything ok? Where? [A Guideline may not apply]
G6 - Mitigate social biases	
G7 - Support efficient invocation	
G8 - Support efficient dismissal	
G9 - Support efficient correction	
G10 - Scope services when in doubt	

Activity 4: Guidelines

AI Design Guidelines	Violation/Everything ok? Where? [A Guideline may not apply]
G11 - Make clear why the system did what it did	
G12 - Remember recent interactions	
G13 - Learn from user behavior	
G14 - Update and adapt cautiously	
G15 - Encourage granular feedback	

Activity 4: Guidelines

AI Design Guidelines	Violation/Everything ok? Where? [A Guideline may not apply]
G16 - Convey the consequences of user actions	
G17 - Provide global controls	
G18 - Notify users about changes	
NG - Other	

Submission Instructions

- One per team, choose a "submitter"
- Convert the set of slides in PDF and name it as follows: *Lastname_Firstname_ex2.pdf* (example: Monge_Alberto_ex3.pdf)
- Upload the resulting file to OwnCloud, at the following URL: https://baltea.polito.it/owncloud/index.php/s/6Gu1kC5w5KtBff4
- By the end of the week (**Feb 6, 2022**)