

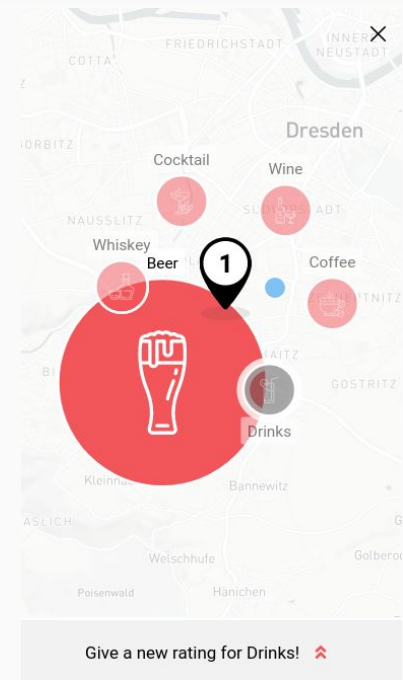
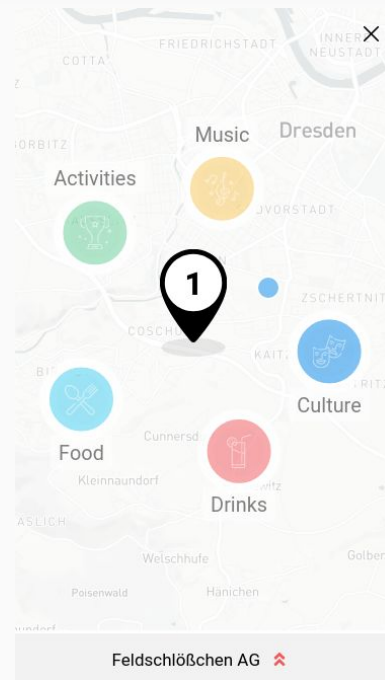
Recommender-App

01/26/18 - Julian Haluska, Tim Kluge



Outline

- App Idea
- Architecture
- Adaptation contexts
 - Screen size and input device
 - Connectivity
 - Location
- Lessons learned



App Idea

- Recommendations for Locations
- User gives explicit feedback:

Food, Drinks, Music, Culture, Activities

- Current location of user is used
- System calculates appropriate recommendations



Pizza



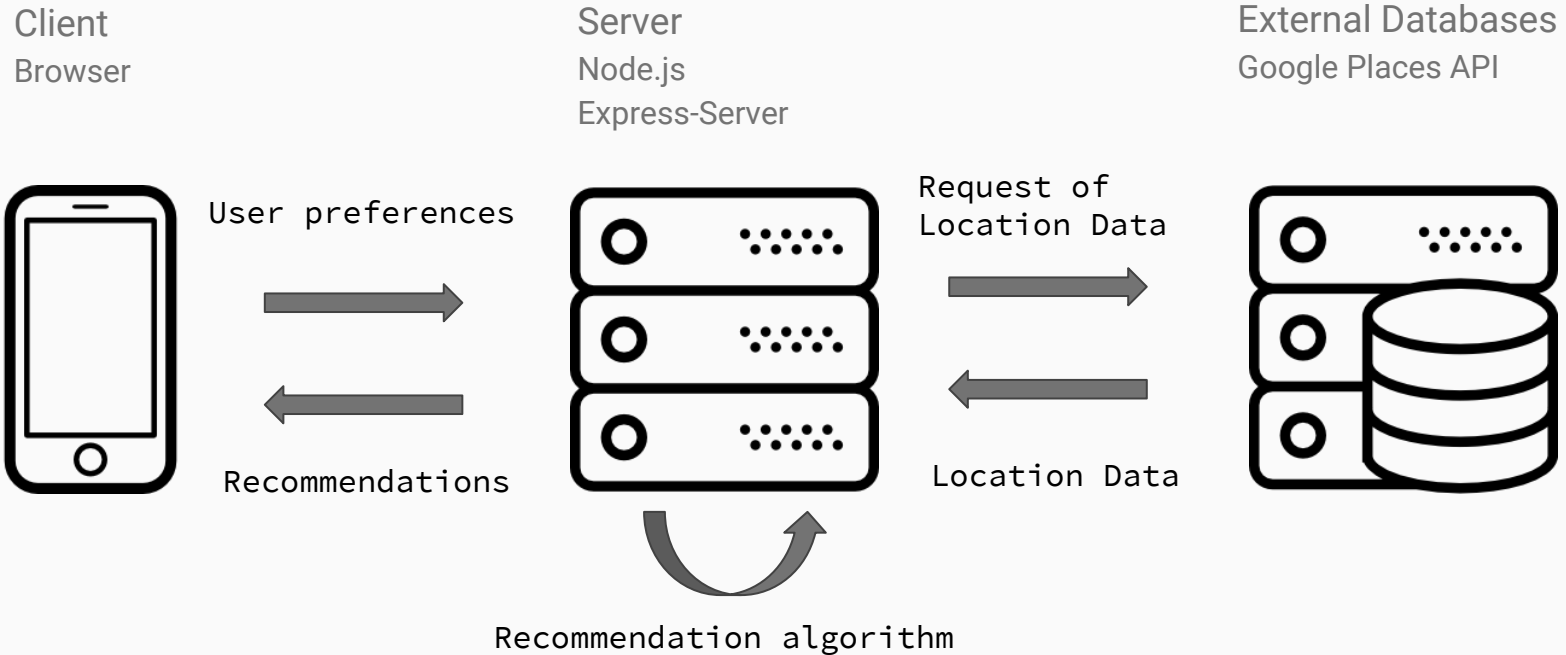
Food



Food

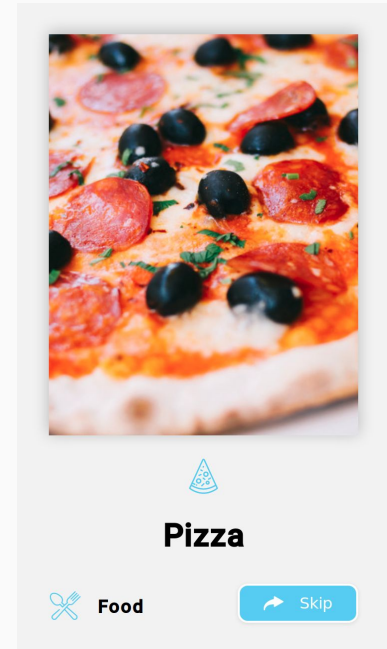


Architecture



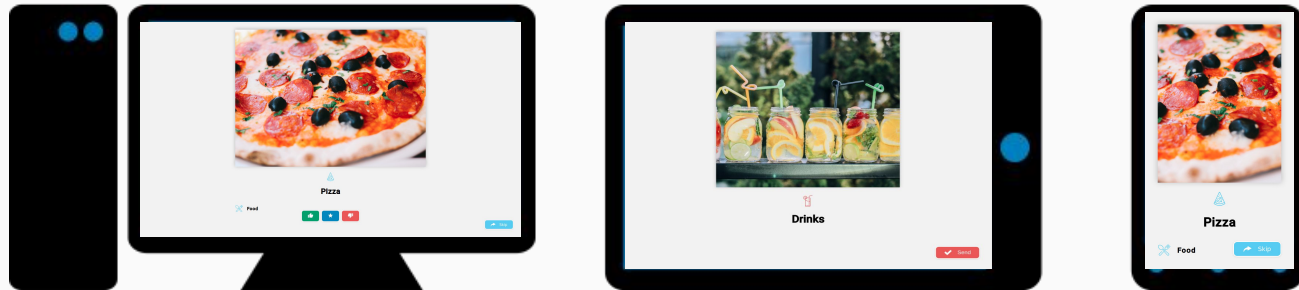
Connectivity Adaptation

- App should work with a fast (LTE) and with a slow (2G) connection
- All communication goes through server; Reduce network usage as much as possible
- Detect connection speed with HTML5 NetworkInformation (provides connection type)
- If connection is \leq 2G, do not load preview / category images



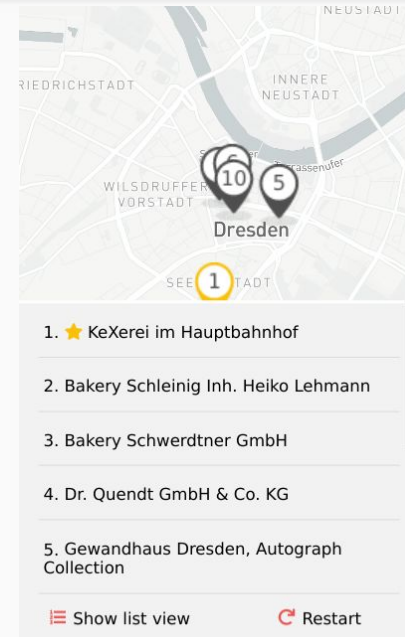
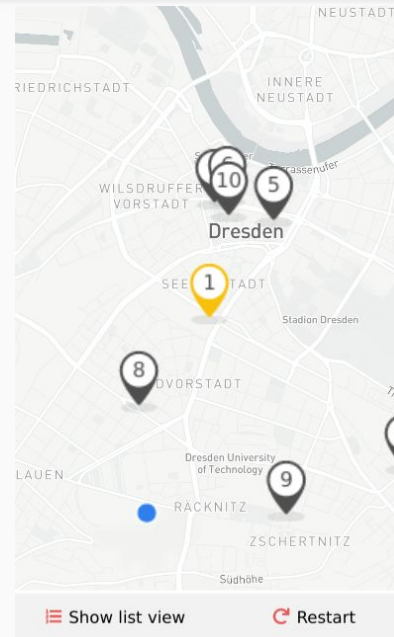
Device Adaptation

- Progressive web app can run on all devices (PC, tablet, smartphone)
- Input support for mouse **and** touch necessary
- Provide a usable UI on all screens from 5 inch to 24 inches
- Pixel thresholds: Load low definition images



Location Adaptation

- After the user provides his feedback, show potential places based on user's current location
- HTML5 Geolocation:
 - Latitude
 - Longitude
- Distance to place is used in recommendation algorithm
 - Default: 3 km
 - Adapt to zoom



Lessons learned

- A modern web app has a huge set of dependencies (dev mode 21 MB JS)
- PWAs can replace native apps
- Firefox < Google Chrome

Demo

Questions?