



App

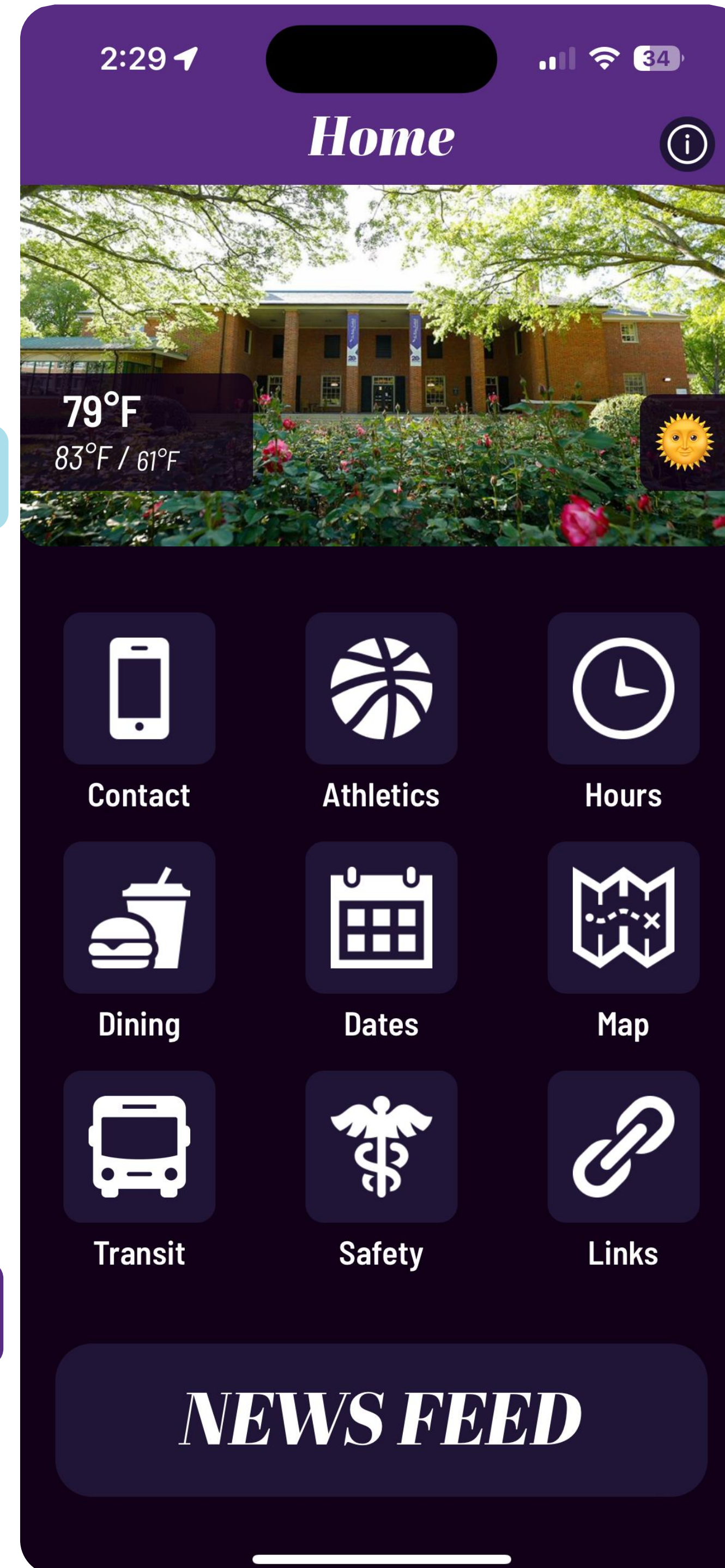
Furman Now! was created in 2020 to collect information from across campus into a single, unified location. By 2024, the app was outdated, partly broken, and hard to maintain due to its separate Android and iOS versions. For my senior seminar project, I ported the app into a **single React Native codebase**, **updated the design**, and added several **new features**.

React Native

Programs must be customized for the operating system they are running on. iOS apps are written in Swift or Objective C; Android apps are written in Java or Kotlin; and each OS has a different API for interacting with the phone's features. This can lead to issues with apps on different platforms having *different code* & *different features*. React Native allows programmers to write a **single app** which is then **transpiled** into the languages & APIs for each device. [1] This also allows developers to use open-source JavaScript & React libraries in their apps, speeding development.

Other Features

Furman Now! includes upcoming **athletic events** and recent scores, live **hours** to shops and buildings on campus, **campus weather**, a searchable **campus map**, **CLP dates**, live **menus** from the DH, and phone **contacts** across campus. It also has support for screen reader applications on iOS and Android.



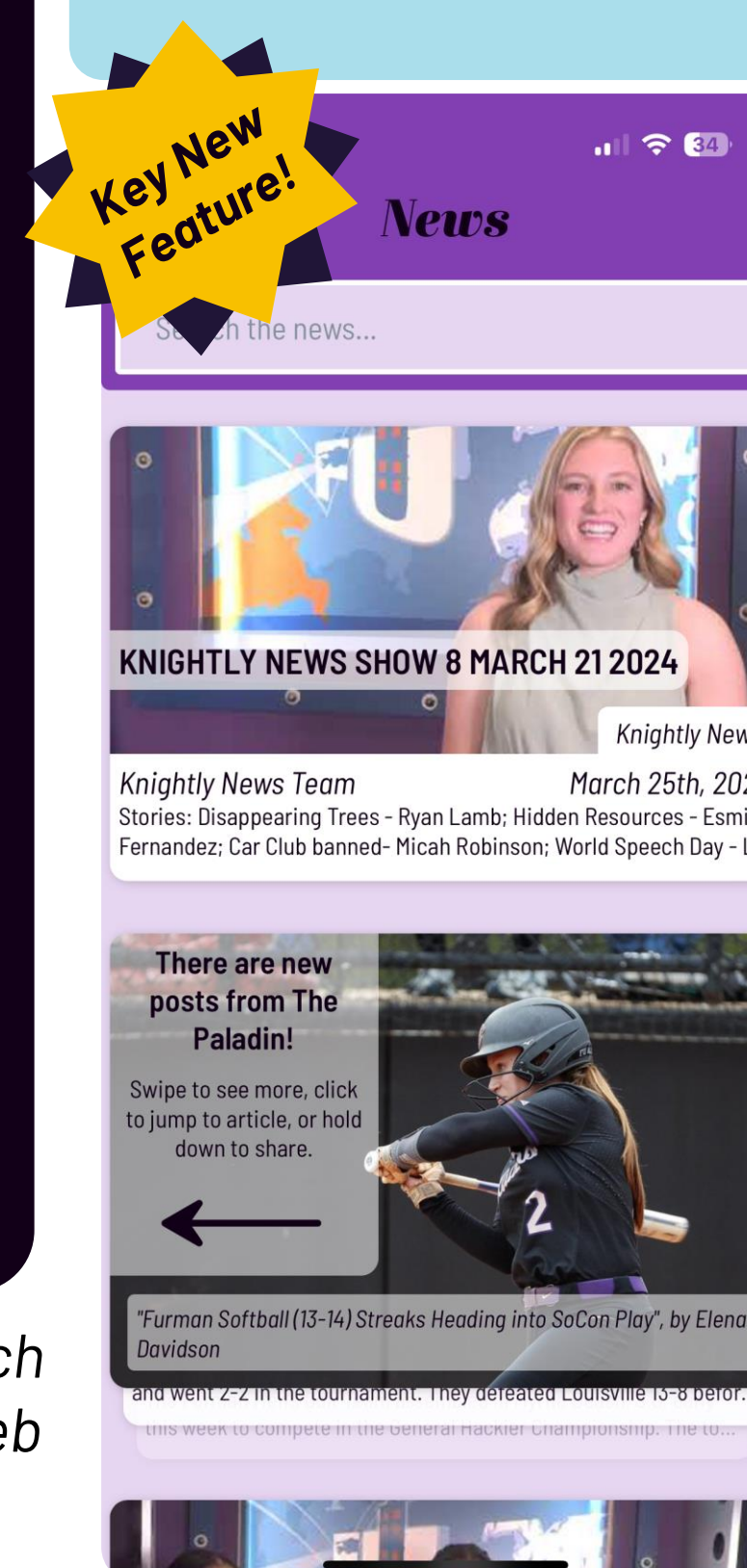
The redesigned **Furman Now!** home screen, which draws inspiration from the Furman University web style guide. It has both a light and dark mode.

Transit and Sustainability

Furman has an on-campus trolley, and a stop on the Greenlink 503 bus route which goes between campus to downtown. "Smart transit apps" with real-time locations improve for rider wait-times, ridership numbers, health, perceived safety, and views of transit. [2, 3] 30% of riders said real-time location information increases how much the ride transit. This live information allows riders to better plan their trips, translating both into time saved for passengers & an increase in walking when riders know that buses are so far away that walking would be faster. [4] Furman Now! acts as a **"smart transit" app for Furman's campus** to help improve campus transit utilization.

News Aggregation

The largest hurdle to news readership and viewership is **discovery**; platforms which bring sources together and present them to readers cause readership to increase by up to 14%. [5] Furman has multiple student publications, as well as several staff-run ones, though students aren't always aware of the, or willing to seek them out. As a new feature, Furman Now! combines this news into a **campus-wide feed**, letting users browse campus **headlines**, read new **posts**, and watch student-made YouTube **videos**.



Resources

Documentation:

<https://m-peeler.github.io/FurmanNowDocs>

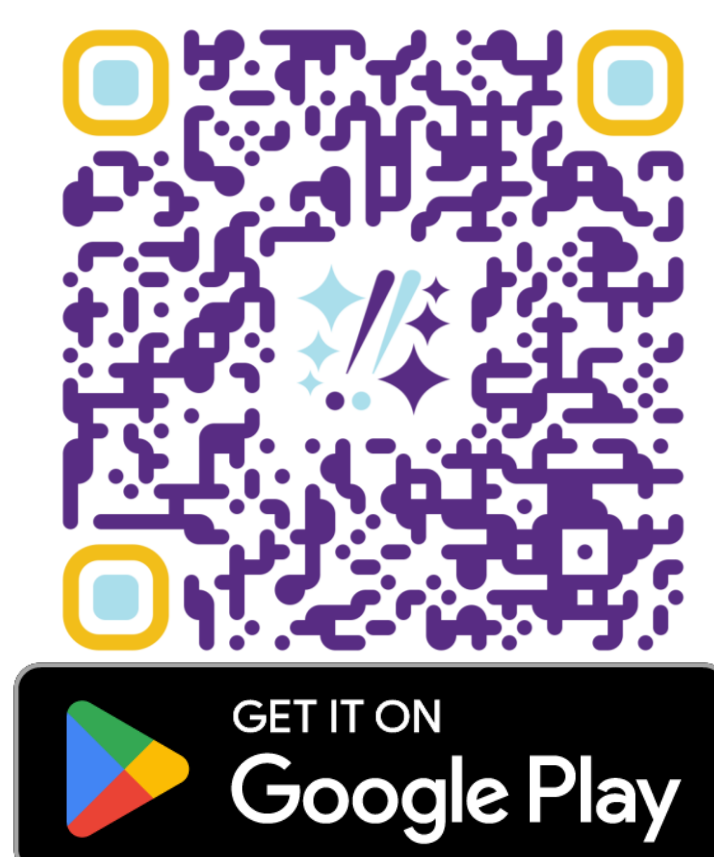
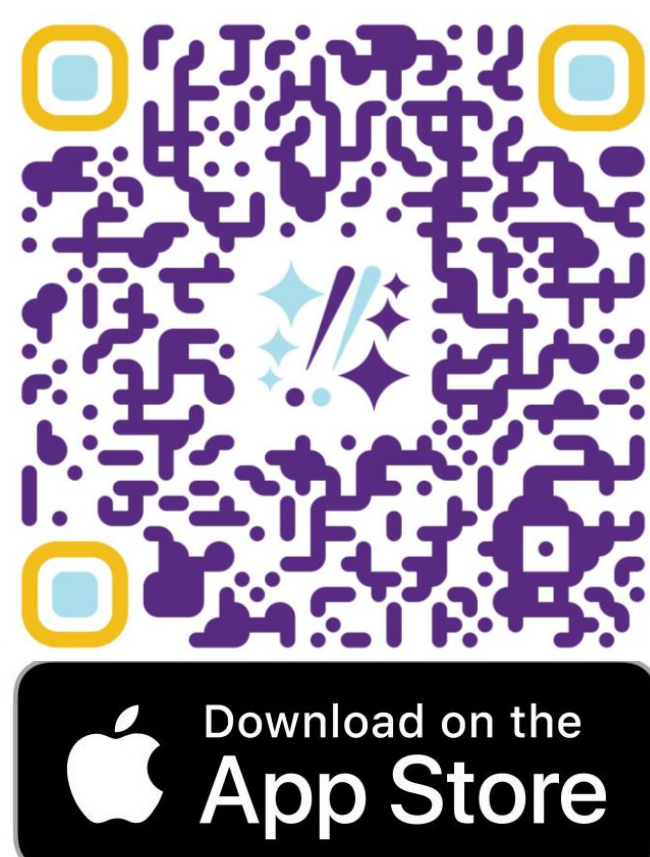
Server-side Information Aggregation:

<https://github.com/m-peeler/FurmanNowScrapers/>

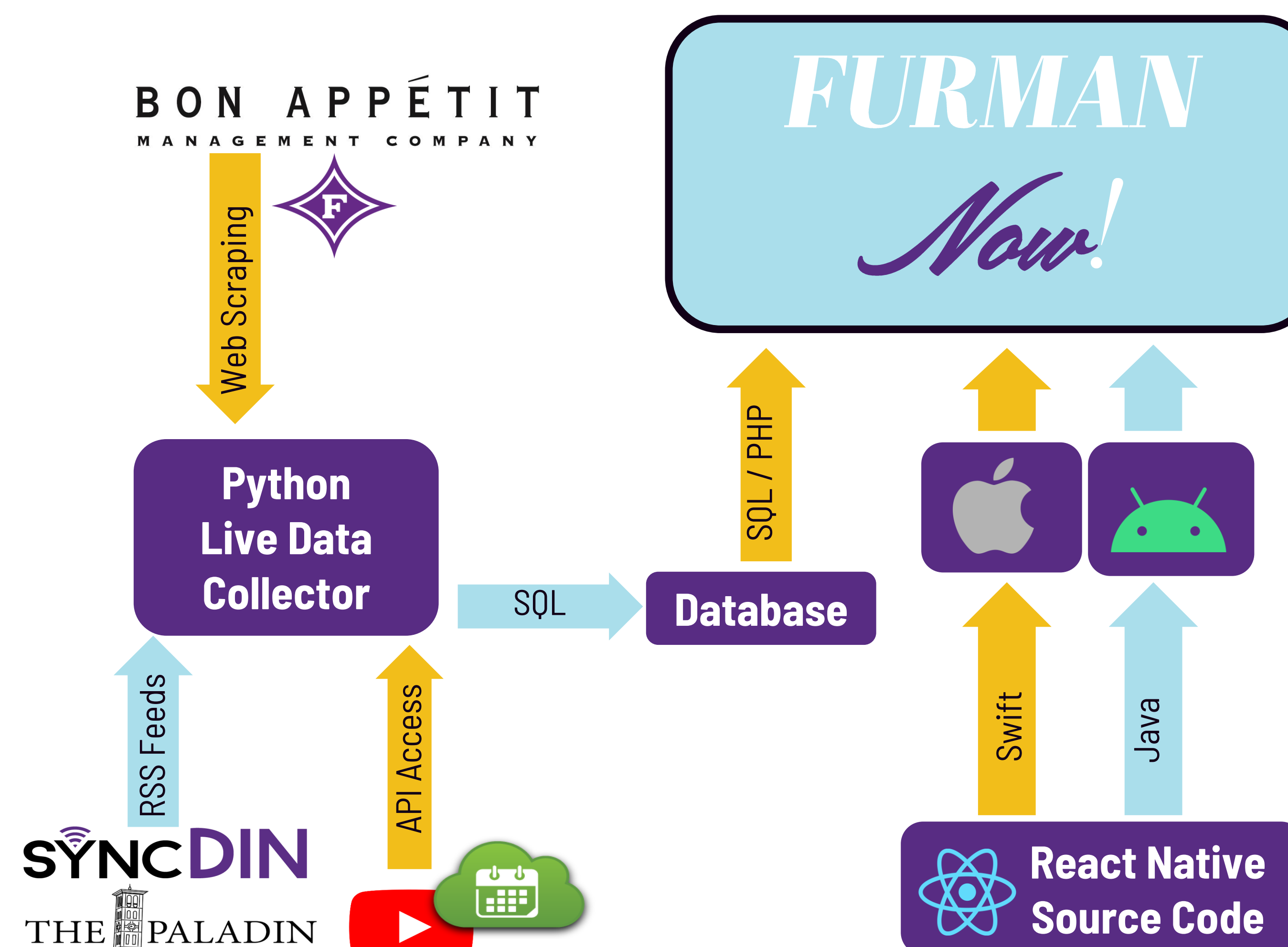
App React Native Code:

<https://github.com/m-peeler/FurmanNowReact/>

Download the *FURMAN Now!* App



Data Flow



References & Acknowledgements

- [1] Andreas Bjørn-Hansen, Tor-Morten Grønli, and Gheorghita Ghinea. A survey and taxonomy of core concepts and research challenges in cross-platform mobile development. *ACM Computing Surveys*, 51(8):1-34, 2019.
- [2] Aaron Gooze, Kari Edison Watkins, and Alan Borning. Benefits of real-time transit information and impacts of data accuracy on rider experience. *Transportation Research Record*, 2351(1):95-103, 2013.
- [3] Jiahe Bian, Wei Lia, Sinan Zhonga, Chanam Leea, Margaret Fosterb, and Xinyue Ye. The end-user benefits of smartphone transit apps: a systematic literature review. *Transport Reviews*, 42(1):82-101, 2020
- [4] Ryan N. Fries, Anne E. Dunning, and Mashrur A. Chowdhury. University traveler value of potential real-time transit information. *Journal of Public Transportation*, 14(2):29-50, 2011
- [5] Joan Calzada and Ricard Gil. What Do News Aggregators Do? Evidence from Google News in Spain and Germany. 2018.

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