

The Powdr Team

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Powdr

A Social Ski App



Introduction & Description

Powdr is a social media application designed for connecting skiers and snowboarders around the world. In a world where social interaction is becoming less and less frequent, we have taken it upon ourselves to hone our coding skills with a project that was not only

important to us individually, but important to the ever-changing dynamic of interacting with others who share similar hobbies and passions.

Our application allows New Mexicans to connect with each other through an intuitive and user-friendly UI . Users of the application will have several features available upon signing into the app. After signing in using their Google Sign-In credentials, users can create posts to share with others through a shared community wall by sharing photos and text posts. In addition to the wall, users can record data in relation to a ski trip, such as the distance traveled and total days ridden for a given season, as well as check the weather of various ski resorts in the New Mexico/Colorado area through the use of the World Weather Online Ski Weather API. If they desire, they can add other users to their friends list and message each other to plan future trips, meetups on the mountain, general talk, etc. Powdr aims to connect skiers and snowboarders alike, to come together and experience all that the beautiful southwest wintersport community has to offer.

Intended Users:

- Skiers and snowboarders who want to meet and befriend others in the community.
- People who are interested in the mountain ski resort weather.
- Riders who are interested in seeing their stats for the season.

Technology & Framework

Back End:

- Ubuntu Linux OS
- Apache HTTP server configured as reverse proxy
- JRE 8
- Apache Tomcat Java application server
- Web service application, incorporating:
 - Data model
 - Embedded Apache Derby database
 - Hibernate ORM
 - Custom entity classes
 - Spring boot Data
 - Custom data repository interfaces
 - Service controllers
 - Spring MVC
 - Custom controller classes
 - View composition & serialization
 - Jackson JSON
 - Custom view classes & interfaces
 - Authentication
 - Spring Security
 - Google Sign In (external service; see <https://developers.google.com/identity>)
 - Custom authentication verifier method for audience (client ID)

Front End:

- Android OS
- Data model
 - SQLite
 - Room ORM
 - Custom entity and other model classes
 - Custom type converters
 - Data access object (DAO) interfaces
- Remote service interfaces
 - Retrofit
 - ReactiveX
 - Gson
 - Custom serializer/deserializers
- Viewmodel components
 - Android Lifecycle framework (ViewModel & LiveData)
 - Custom viewmodel classes
- View
 - Custom RecyclerView.Adapter and RecyclerView.Holder classes
 - Custom layouts
- Controller
 - Custom activity and fragment classes
- Authentication
 - Google Sign In (external service; see <https://developers.google.com/identity>)
 - Custom sign in service class