

IBM FISE Concierge

Concierge is a voice assistant designed to make common services more accessible to elderly users in these turbulent times.

Working as part of the **IBM FISE v2** portfolio of projects to help the elderly in times of social isolation through voice assistance.

Features

Concierge is designed with the end user always in mind.

- **Simple interface** - *Concierge does away with seas of menus to provide an equally powerful and intuitive method of navigation.*
- **Privacy first** - *Concierge employs **localised speech processing** - your audio is neither recorded or stored*
- **Manage your circle** - *As an admin, you can manage every aspect of all members in your circle - from their medical needs to their favourite dish.*
- **Check-in with loved ones** - *Users can check in with loved ones from within the app, just to let everyone know they're okay.*
- **Personalised Experience** - *Admins can add specific services to every member of their circle - they can tailor each member's experience to what they need most.*
- **Usage History** - *Admins can keep track of which services each user uses (not what they say) and which services are needed most.*
- **Convenience Features** - *Concierge comes with a built-in stopwatch and custom timers and reminders to give users all they need in one space.*
- **Tailored Responses** - *Concierge employs speech synthesis to give audio responses to the user, giving them someone to talk to when needed.*
- **Infinitely Extensible** - *Have a service? New services can be added to the system in no time. Concierge's API interaction is extremely scalable.*

Deployment

There are several components to Concierge overall. These are the app, the admin site, the backend server, the Service API server and our Ask Bob plugins. Each one has its own deployment guide which can be found in their respective folders.

Please note, to access the guide to run the Service API server, you will have to navigate to `services\src\main\java\services\application` where the deployment guide is given.

Main Technologies

Concierge, powered by:

- [Vue.js](#) - *Admin web app*
- [Java + Android Studio](#) - *Android App*
- [AskBob \(RASA x SPACY\)](#) - *Natural Language Processing*

More information on the development process can be found [here](#).

Elderly Users

Concierge is designed with elderly users in mind who may struggle to interact with the complexities of the current technological landscape. Available through an app, speech is used as the primary mode of communication, allowing users to verbally issue commands and receive audio responses from their Concierge.

The Android app is designed to work on a wide array of Android devices.

More information on the Android app can be found [here](#).

Friends of Elderly Users

Friends of elderly users, called admins, will be able to manage the details of the users - they can add/remove services from their accounts to enhance their experience. To activate a user account, the admin will register their details on the web app. Once completed, a unique three-word phrase will be generated, and this will have to be quoted on the android app to “unlock” and activate the account for the user. Note that these

codes do not expire meaning user data can be transferred between Android devices.

More information on the web app can be found [here](#).

Services

The interaction with external APIs is a standalone system - it can be pulled out and deployed into your ecosystem with no configuration required.

The plugin system is extremely extensible, new services can easily be added with no programming knowledge required. Any API response can be turned into a natural language sentence(s) using transformation rules you specify.

More information on the standalone external API plugin system can be found [here](#).

Contributors

Concierge, brought to you by:

- **Calin Hadarean** - *NLP & Backend Developer*
- **Ernest Nkansah-Badu** - *Web App & Service API Plugin Developer*
- **Mohammad Syed** - *App Developer & Blog Author*

Supervised by Dean Mohammedally and John McNamara.

Acknowledgements

Images

For the service images, shown on the admin web app, all images were taken from [unsplash](#) (free for commercial use but attributions are shown below nonetheless):

- *Food photograph*
by [Rachel Park](#)

- *Tram photograph*
by [zaya odeesho](#)
- *Sunlight photograph*
by [Syed Ali](#)
- *Charity photograph*
by [Joel Muniz](#)
- *Stocks*
photograph [Jamie Street](#)
- *News photograph*
by [Markus Spiske](#)
- *Book photograph*
by [Alfons Morales](#)
- *Joke photograph*
by [Tim Mossholder](#)
- *Dictionary photograph*
by [Joshua Hoehne](#)
- *Air quality photograph*
by [JuniperPhoton](#)