# Digital Health Assistant

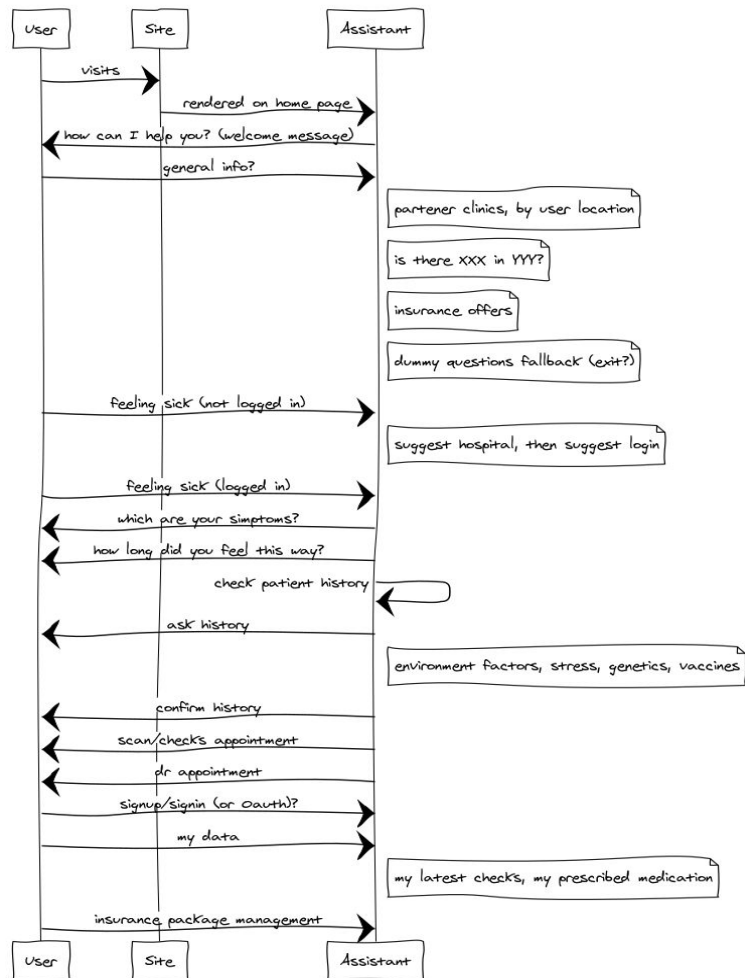Team54

Main Idea – Chatbot challenge

Background: we've had multiple application ideas and because we didn't decide it, we brought up to vote. Around 50 people (technical and less technical), voted, and by far on the first place came the idea of a implementing a digital assistant(interactive chatbot) for a health insurance company.

Used technologies and high-level overview
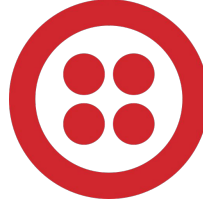
- Angular 8
  - Angular Material, Angular Flex Layout, Bootstrap, ng-chat
- NodeJS w/ Typescript
  - tensorflowjs | rxjs | nodemailer | Tslint
- Firebase
- Twilio Flows and Functions
- Python
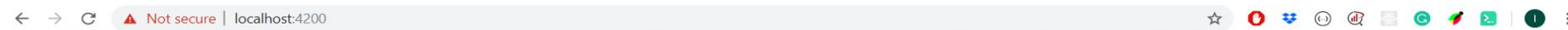 - Numpy | tensorflow | tensorflowjs | pandas | keras | nltk |

assistant flow

User | Site | Assistant

User → Site: visits

Site → Assistant: rendered on home page

Assistant → User: how can I help you? (welcome message)

User → Assistant: general info?

Note: partener clinics, by user location

Note: is there XXX in YYY?

Note: insurance offers

Note: dummy questions fallback (exit?)

User → Assistant: feeling sick (not logged in)

Note: suggest hospital, then suggest login

User → Assistant: feeling sick (logged in)

Assistant → User: which are your simptoms?

Assistant → User: how long did you feel this way?

Assistant → Assistant: check patient history

Assistant → User: ask history

Note: environment factors, stress, genetics, vaccines

Assistant → User: confirm history

Assistant → User: scan/checks appointment

Assistant → User: dr appointment

User → Assistant: signup/signin (or oauth)?

User → Assistant: my data

Note: my latest checks, my prescribed medication

User → Assistant: insurance package management

User | Site | Assistant

Goals of DHA (Digital Health Assistant)

- A user will be able to contact the assistant via web browser, phone call or SMS, (income, outcome). All the discussions will be interactive (write and verbal)
- The DHA should be able to provide general informations about: clinics (partners clinics of the insurance company), doctors, insurances, doctor schedules, historical analysis results, blood groups, near pharmacies & hospitals, drugs reactions, etc.
- Using DHA, a logged user can manage his insurance (delete, upgrade/downgrade the package, etc). **The page of insurance company will have sign up/sign in features, among others.
- If a user complain about pains the DHA should be able to suggest what analysis the user to perform (RMN, etc) based on set of questions. Also in this context the DHA will suggest to make several appointments to needed analysis. Example: if the user has hearth discomfort our DHA will suggest to perform some blood analysis (relevant for heart diseases) and an EKG. Also he will suggest the nearest time slots and laboratories available for this. The user will be able to choose or ask for another intervals. If they we'll agree the DHA should be able to suggest (knowing when the results will be finished) an appointment to the properly doctor.

Landing page