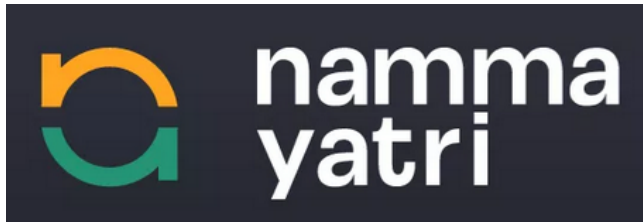


// documentation



Namma Yatri

Open Mobility Challenge

// problem

Booking Without App

// solution

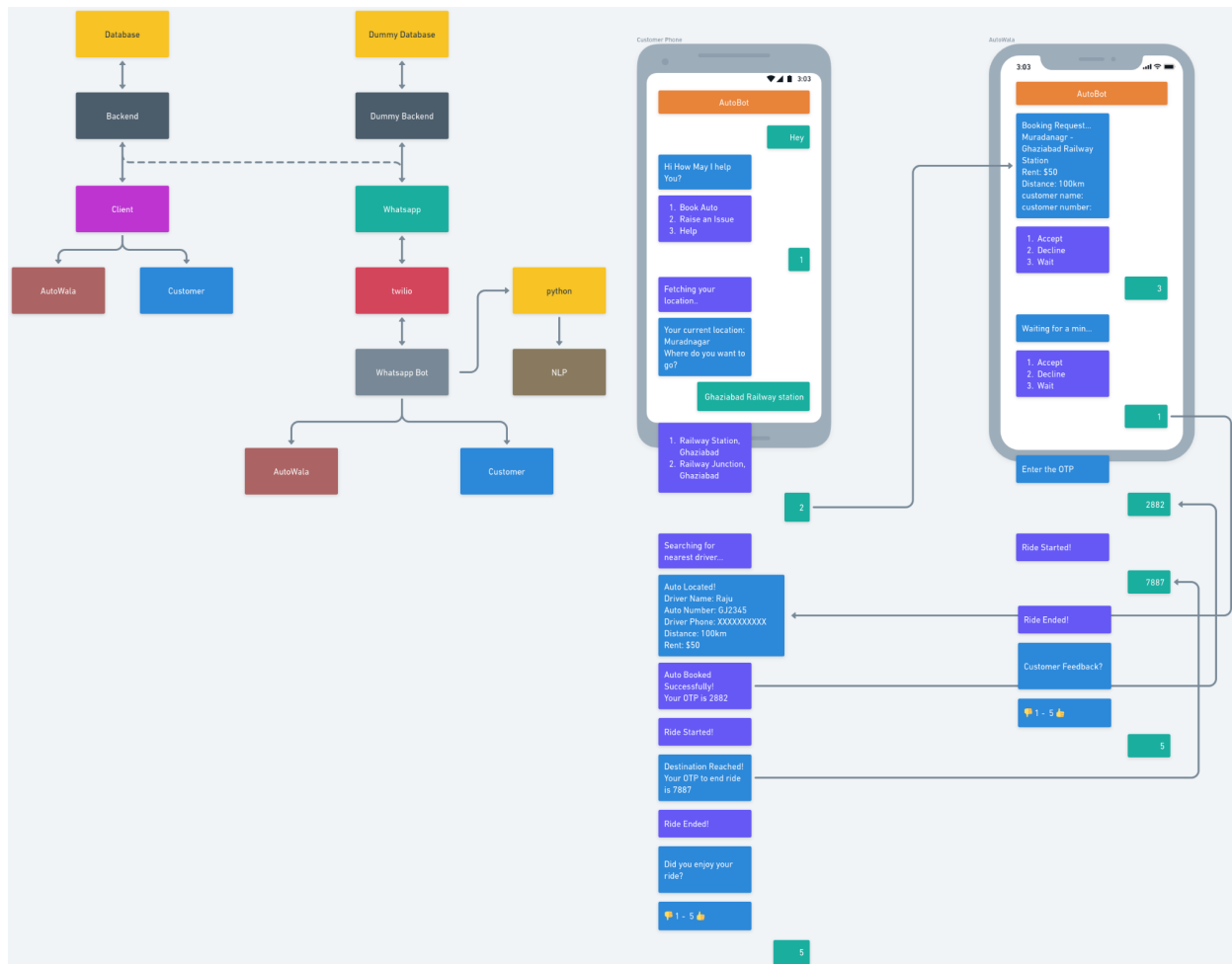
AutoBot

- WhatsApp Bot that allows users to book auto.

// team

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- **Prajesh Pratap Singh**

// block diagram



// features

- Quickly book an auto through whatsapp
- Track driver's location
- Make payments easily
- Report an issue

// technology used

- Twilio
- OpenAI
- Firebase
- Ngrok

- AWS
- Python

// entities

- User: User is the person who is booking the auto through client
- Driver: Driver is the person who owns an auto and drives it.
- Customer: can be a user or driver.
- Client: AutoBot - whatsapp client which customers interface with
- API: twilio that connects client and server
- Server: the backend - EC2 instance hosted on AWS where the data fetching from database and client takes place. It also handles response mechanics (to send which response to the client based on the query received from the client). It is connected to the client by the callback url provided by ngrok which is fed into twilio
- Database: Firebase where customers data is stored
- Query: text from customer to client
- Response: text from client to customer

// pre-requisites

- Customers must have a namma yatri account.
- Customer has their whatsapp number registered on the namma yatri app
- Customer has enabled whatsapp payment
- Customer has allowed location permission to whatsapp

// working

- User
 - saves client's phone number in their phone
 - texts `hi` to the client on whatsapp
- The client
 - extracts the number of the user from whatsapp and sends it to the server. This phone number is then compared to the phone numbers in the database and when a match is found, the corresponding user's information is fetched and stored in the server.
 - Responds back with three options:

- Book
 - Report
 - Help
- Waits for user to respond
- If user chooses
 - Book
 - The client
 - fetches the current location of the user using whatsapp live location feature and sends it to the server..
 - Asks the user where he/she wants to go.
 - User inputs the destination.
 - The client then sends this destination to the server.
 - A route is formed on the server with a source and destination, distance, rent and is sent as a whatsapp text through the client to the nearest driver along with the user's name and contact number.
 - This request is timed for 2 minutes i.e., after 2 minutes this request will be forwarded to another driver in the vicinity.
 - The driver has three options to choose from:
 - Accept
 - Driver has a live location of the user so that he/she can drive to the user.
 - The client asks for the otp.
 - User receives a text containing the driver's name, vehicle number, contact number, rent and otp for the ride.
 - Live location of the driver is shared with the user so the user can see how far the driver is.
 - Once the driver reaches the user, the user gives otp to the driver.
 - The driver texts this otp to the client which sends this otp to the server.
 - The server verifies this otp with the otp it sent to the user.

- Once verified, the client, driver and user receive text that the ride has started.
- Once they reach the destination, client user and driver receive text saying destination reached.
- The client requests for the rent through whatsapp payments.
- The user pays the amount and the money is transferred to the driver's account through UPI.
- The client then asks for feedback from client user and customer.
- Decline
 - The request is declined and the client searches for another driver in the vicinity.
 - After 5 minutes of searching, the client texts the user stating no ride found, retry booking.
- Wait
 - The client waits for 2 minutes before transferring the request to another driver.
 - After 2 minutes, the client asks the driver the same three choices again.
 - The driver can use the wait option only 2 times in a row.
- Report
 - The client asks the user to write their query and send it.
 - The client sends this query to the server where this query is saved into the database.
- Help
 - This command displays all the useful commands the client provides.
 - Explains the client usage to the user and driver.
- If a user or a driver asks a random query like, "How's the weather?"
 - chatGPT answers their queries.

// future work

- Integrating
 - Google places API for suggesting destinations
 - Google's Dialog flow for better customer experience
 - Whatsapp payments for direct payment of rent from user to driver
 - Auto share ride
 - Multiple users can ride an auto based on the seating capacity of it
- Encrypting queries and responses

// conclusion

Thus, AutoBot enables users to book an auto without using Namma Yatri App without any hustle. It's quick, reliable, secure and very easy to use.