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@touristrecommenderbot

Development of a Chatbot for Tourist Recommendations

About the Chatbot

• *@touristrecommenderbot* on the instant messaging app *Telegram*

• Recommends points of interest based on data from *OpenStreetMap* and *Foursquare*

• The recommendations are based on the user's interests and current location

Technical Specification

• Java Spark Web Application

• Multitier Architecture

• Runs in the Platform-as-a-Service *Heroku*

• Integration of external services: REST-like HTTP API endpoints and Webhook

Conversational Interface

• The Natural Language Understanding Platform *API.AI* interprets the user input.
• The conversation flow is modeled using the NLU concepts intents, entities and contexts.

Recommender System

• Combines the recommender system approaches collaborative filtering and content-based filtering
• Applies and adapts algorithms from the machine learning library *Apache Mahout*

Geographic Information Processing

• Geographic data from *OpenStreetMap* is stored in a *PostGIS* database
• The data is interpreted and converted into *Points of Interest* that are used in the recommendation process

touristbot
bot

Hey there, I am your friendly tourist chatbot! I will try my best to recommend you cool places on your trip.

But first, I need to get to know you a bit. Are you ready? 12:53

Yes 12:54

Ok, great! Please tell me some things you are interested in when you visit a new place. 12:54

I like museums! 12:54

So you are interested in culture, is that correct? 12:54

Yes! 12:54

Ok great, I will keep that in mind!

Hey there!

Telegram → Application → API.AI
PostGIS
Heroku

FOURSQUARE
HEROKU
api.ai