

# Attica Zoological Park's chatbot assistant

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# Visiting Attica Park

- Attica Zoological Park is located in Spata, the outer suburbs of Athens.
- Public transport and weather information can be challenging to acquire for this specific area.
- Visitors need practical, real-time info before and during the visit.

**Solution:** A conversational agent that incorporates all of this info.

**It features:**

- **Real-Time Accuracy:** Connects to live external systems for relevant data.
- **Context-Awareness:** Doesn't just give data, gives advice (i.e., weather warnings).
- **Instant Access:** Eliminates the need to search multiple apps (OASA, Weather, Zoo Website).

# System's architectures and capabilities

A hybrid system combining **Real-Time APIs** and **Static information**.

It Handles natural language queries and routes them to the correct handler.

## Data Sources:

- **Transport:** OASA Telematics API (Live).
- **Weather:** OpenWeather API (Live).
- **Schedules and Ticket prices:** Internal Mock Database and NLU-based static knowledge.

# Scenarios- Transport and Weather

## Real-Time OASA Integration

- Connection to OASA Telematics API to get live arrival data.
  - Targets Stop 440119, the closest stop to the park.
  - Maps numeric route\_codes to human-readable route descriptions.
- User Value: Displays minutes remaining and general route info.

## Real time OpenWeather integration

- **Source: OpenWeather API** using the park's specific geographic coordinates.
  - It provides meaningful advice based on conditions, not just data.
  - For instance: If Raining, the system advises the user against visiting.

# Demonstration - Dialogue Flows

## Transport Scenario:

**User:** "Πότε έρχεται το λεωφορείο;" (When is the bus?)

**Bot:** Έχει υπόψη σου ότι το δρομολόγιο εκτελείται από τις 7:45 π.μ. έως τις 20:40 μ.μ. Η κυκλική διαδρομή μπορεί να σε φέρει στο ΑΤΤΙΚΟ πάρκο από Δουκ. Πλακεντίας ή να σε πάρει από το πάρκο και να σε επιστρέψει εκεί.

Επόμενα λεωφορεία κοντά στο ΑΤΤΙΚΟ Ζωολογικό Πάρκο:

- Γραμμή ΣΤ. ΔΟΥΚ. ΠΛΑΚΕΝΤΙΑΣ - ΠΑΛΛΗΝΗ - ΕΚΠΤ. ΧΩΡΙΟ ΣΠΑΤΑ (ΚΥΚΛΙΚΗ): σε 5 λεπτά

## Weather Scenario:

**User:** "Τι καιρό έχει;" (What is the weather?)

**Bot:** Καιρός στο ΑΤΤΙΚΟ Ζωολογικό Πάρκο:- Συνθήκες: ελαφρές νεφώσεις

- Θερμοκρασία: 12.76°C

Ο καιρός φαίνεται κατάλληλος για επίσκεψη.

# Scenarios- Tickets and Schedules

## 1. Ticket Prices (NLU Static Knowledge):

- Prices are stable and publicly available, no API needed.
- Implemented as structured static knowledge within the NLU.

## 2. Animal Schedules (Simulated Task):

- It's Simulated Task Execution
- Uses a Mock Database to mimic a real zoo system.

# Demonstration - Dialogue Flows

## Ticket Scenario:

**User:** "Πόσο κάνουν τα εισιτήρια;" (How much are tickets?)

**Bot:** Τα εισιτήρια για εσάς είναι:

Γενική είσοδος: 25€

Παιδιά 3-12 ετών: 19€

Κάτω των 3 ετών: Δωρεάν

## Schedule Scenario:

**User:** "Πρόγραμμα για πιγκουίνους;" (When are the penguins?)

**Bot:** Αφρικανικοί Πιγκουίνοι: 14:00

# Challenges and Solutions

## Challenge 1: The "Circular Route" Problem

- Stop 440218 had no live data because the route is circular.
- Switched logic to Stop 440119, serving both arrivals and departures.

## Challenge 2: API Data

- OASA returns numeric codes, not names.
- Implemented webRoutesForStop endpoint mapping.

## Challenge 3: Configuration

- YAML syntax errors with Greek text.
- Enforced strict quoting and validation.

# Conclusion and future directions

**Achievement:** Successfully unified Live Data (OASA/Weather) with Static Knowledge (Tickets/ Schedules).

**Resilience:** Handles failures by providing meaningful feedback to the user (e.g., "Data not available").

## Future Steps:

- Replace the static knowledge with a real time data, probably by scrapping the park's website.