Elanco Placement Program: Technical Task - Backend

Introduction & Background

Welcome to Elanco! We are a global leader in animal health, dedicated to innovating and delivering products and services to prevent and treat diseases in animals.

In the US, Elanco operates a successful Parvovirus Tracker, a tool that uses crowdsourced data to map outbreaks of this deadly disease for which we have developed a treatment. We believe that a similar tool focused on the increasing threat of ticks and tick-borne diseases would be invaluable for UK pet owners and veterinarians.

The Purpose

Ticks are becoming increasingly prevalent across the UK, carrying diseases like Lyme disease that affects thousands annually. Your application will serve as a crucial tool for public health awareness, helping citizens identify high-risk areas and contribute to a growing database of tick activity.

The Challenge

Your task is to build a **Minimum Viable Product (MVP)** of a backend system for a web application that brings tick sighting data to life. You'll be provided a raw dataset of tick sighting data, and your task is to create backend services that process, analyse and manage this data. This is a great opportunity to learn data handling, processing pipelines, and analytics in a real-world context.

Requirement

The focus will be on how the data is consumed, processed, and presented.

Data Handling

- Develop a strategic plan to consume and process data from the provided API
- Consider how to handle large datasets, duplicates, and incomplete data.

Search and Filtering

- Allow users to be able to search and filter sightings by time range and location

Data Reporting

- Provide endpoints to deliver aggregate insights, such as

o Number of sightings per region

o Trends over time (weekly or monthly)

o AI/ML Insights (Extension task)

Error Handling

- Implement a better way to handle API failures and data inconsistencies

Additional requirements

Documentation and though process

If you have the time, this is optional

- Provide a short document explaining your architecture decision,

- How your system consumes and presents data (you can also add screenshots)

- Things you could have done better if you had more time

Technical Stack

You are free to use any backend technologies you are comfortable with (including language and associated libraries). You should be prepared to discuss your choices at the interview. This is a great opportunity to show off your technical skills, if you complete the core requirements feel free to build upon this task and show us new and innovative ideas!

Deliverables

Please submit the following by 9am 24th of November to BECKY.MEARS@network.elancoah.com

- A link to a public GitHub repo containing all your code.

- Your repo must contain:

▪ A README of your choices and project outline.

▪ Instructions on how to run your project.

- A video (can either be within the repo or submitted via an unlisted YouTube Video) no more than 10 minutes of a walk-through of your project.

- Remember to include your name in the submission!

Any issues please reach out to BECKY.MEARS@network.elancoah.com

We look forward to seeing what you build! Good luck!