X-Lab Engineering Interview Challenge - Leeds Beer Quest

The Challenge

The core data for this challenge is based on pubs around Leeds. The raw data can be found [here](#) and is based around the [Leeds Beer Quest](#)

X-Lab would like to build an application using this data, that presents information about pubs in and around Leeds to their staff so that they can choose an appropriate post-work watering hole based on their location, rating and services offered.

This challenge can be attempted in one of 3 ways, depending on core discipline.
- Front end focussed:
  - Use the API provided at https://datamillnorth.org/dataset/leeds-beer-quest (this wraps the above dataset) to build a front end application to present this dataset in a searchable manner to end users
- Back end focussed:
  - Using the above dataset, build an API that can be used by front end applications.
- Infrastructure focussed:
  - Deliver a working infrastructure to house all components of the system. We will provide base containers on request, or you may use your own.

Principal Engineers (and senior engineers looking for extra kudos) should attempt aspects of all three challenges in order to demonstrate breadth of knowledge across the disciplines.

The Logistics

This challenge will be split into two parts:
1. An initial build to be done by the candidate in their own time
   a. You may spend as long as you like on this part of the challenge, although we expect an hour or two to be more than sufficient - we do not expect candidates to give up days of their time.
2. A pair programming exercise with an X-Lab engineer to build on the work undertaken in (1) as part of a technical interview, if selected to proceed.
   a. This exercise will look to explain and clarify approach before undertaking an extension of it as a pair.

You may use the programming language and frameworks of your choice, unless given specific steer during initial conversations. You are free to use any tooling, libraries etc that you like and to deliver this in a typical manner - Google and SO are absolutely allowed.

The solution can include supporting documentation, diagrams or pseudo-code as you see fit to support any code produced. Please consider portability in your solution; this may be reviewed by someone running on a different OS/platform from you.

Given this is an open challenge, there is no expectation of receiving "complete" solutions - this is designed to understand approach to engineering and overall confidence in technology, not to produce a working production application.

The solution for part 1 should be submitted 2 days prior to part 2 to allow time for review before the pairing challenge, where possible. The preference for sharing this would be via GitHub, but any reasonable means is acceptable.

For clarifications, please email careers@x-labsystems.co.uk. We would also encourage candidates to feed back on the format of this challenge, and their experience with it, so that we can help improve it in the future.