SENIOR GEOSPATIAL ANALYST

CANDIDATE PROJECT

Note: onX respects the time and effort provided by applicants during the interview project. Information provided during the interview challenge is solely meant to evaluate an applicant's ability to perform the role. Please anticipate spending 4-5 hours to complete the challenge.

Interview Project: Hunting Unit Insights

Objective: The goal of this project is to evaluate the candidate's proficiency in sourcing, standardizing, analyzing, and visualizing geospatial data related to hunting. This task should demonstrate the candidate's skills in automation, data standardization across multiple sources, understanding of spatial relationships, discovering hunting-relevant geospatial datasets, and the ability to clearly communicate results to non-technical stakeholders.

Project Description: Create an interactive, web-based map intended to support planning and in-field use when hunting in a new unit for the first time. The map should include information relevant to decision-making on unfamiliar ground, including access information, relevant regulations, and key characteristics of the hunt unit. Focus the map, data, and analysis on a single species. Data sources may include open government data, user-generated content, and other publicly available geospatial information. The solution should reflect an efficient, scalable approach to data acquisition and processing, making use of programmatic methods and automation where possible.

Requirements and Deliverables:

1. **Data Collection**
    - Identify and extract data from relevant sources. Data collection, cleaning, and integration should leverage automation where appropriate.
    - Ensure all data collection processes are clearly documented and reproducible. (See Submission Guidelines)
2. **Processing and Standardization:**
    - Collect and standardize relevant hunt unit data and geometries from the best available sources.
    - Demonstrate the use of automation techniques (e.g., Python scripts) to efficiently source, standardize, and normalize data. Address challenges such as inconsistent terminology and varying data schemas across sources.

- Build appropriate relationships between datasets such as access, regulations, and key unit characteristics to support an effective hunting-focused map experience. Avoid data duplication and deliver clean normalized data.

- Include all datasets and processing steps used in map creation as part of the deliverable, with thorough documentation. (See Submission Guidelines)

3. **Map Creation:**
   - Develop an interactive, web-based map that highlights area and hunting information relevant to someone hunting the area for the first time.

   - Use styling, map interactions (e.g., queries, pop-ups), and other techniques as appropriate to enhance usability and clarity.

4. **Summary One-Pager:**
   - Provide a concise summary explaining your project, highlighting your methods, key insights gained, and how your map would benefit an angler new to the area.

Evaluation Criteria: Candidates will be evaluated based on the following criteria:

- Effective use of automation for data collection and standardization
- Proficiency in working with geospatial data sources
- Accuracy, clarity, and usability of the map
- Demonstrated understanding of hunting and relevant contextual information
- Quality and clarity of documentation and the summary

Submission Guidelines: Please submit all deliverables, including the map, datasets, scripts, documentation, and summary one-pager, by the assigned deadline. Revisions after submission will not be reviewed; ensure your work is complete and accurately represents your skills upon submission.