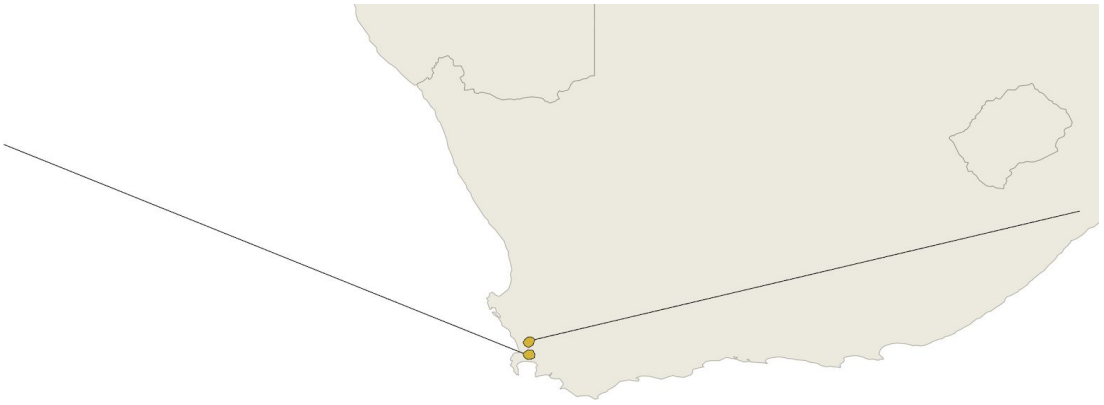
KARTOZA
OPEN SOURCE GEOSPATIAL SOLUTIONS

Technical Assignment

Prospective GIS Developers

Thank you for agreeing to participate in our technical review process for candidates wishing to find employment with Kartoza as geospatial application developers. This assignment is simple and the following requirements should be met:

Create a simple application that uses a suitable python or C++ library to open the accompanying GeoPackage file and remove the spikes from the polygons.



Your solution should exhibit the following properties:

- Favour simplicity over complexity.
- Favour meaning over terseness.
- Ensure that your code is accompanied by tests that pass correctly and will catch future regressions.
- Python implementations: Ensure that your code is documented in a python standards compliant manner
- Python implementations: Ensure that your code is formatted in compliance with PEP8 and passes inspection using tools such as flake8.
- Ensure that the topology and geometry of the polygon is unaffected in all other respects after removing the spike.
- The solution should generate a new table or file and leave the original untouched.
- Provide a logical diagram that explains your implementation

- Be prepared to run your code on a second dataset that will be provided during the interview.

This assignment is accompanied by a small dataset that you can use to develop your solution against.

Your solution should be placed in a public version control system such as Git/GitHub and be accompanied by a README.md with clear instructions on how to download and use the tool you have created. The readme should include a copy of your system diagram. The VCS should show the full history of your work and should not be populated with a single commit.

Bonus points: Enabled CI integration with your code repo such that any new code added via a PR will be automatically tested and display an indicator as to whether the tests have passed or not.

Unless specified otherwise, there is no time limit set for this assignment. When submitting it, you should note (and be verified via your commit history) how long your solution took to develop.

Please note: We will not answer any further questions relating to this assignment, you are expected to submit your response with no further input from Kartoza.