

Develop Technical Task Outline

Outline

This Technical Task is to illustrate the thought processes and ability to be able to consume data, check data and insert the data into an SQL containerised database.

Please provide your code via relevant means (such as Github) and a ReadMe file explaining how to run your code. Note your approach, thoughts, any problems you encountered and how they were overcome for discussion, sent via email to: Thomas.Nickson@urbantide.com.

uSmart

Our uSmart platform is progressing towards using Redshift to store and query all data sources, this is injected into by multiple different pipelines. Development of these pipelines is the primary objective of the successful applicant alongside other backend work. Javascript is our primary language throughout using NodeJs within our microservice architecture. New sections of the pipeline are constructed using Python and Flask. Feel free to use either of these technologies. Our backend is setup via docker containers and managed by DCOS and integrated through Circle CI.

Task

The task aims to consume data from a csv through a web api, use it to infer and create an appropriate table for SQL with the correct data types, perform some basic outlier detection on it and insert the data into an SQL container using the



language of your choice if no outliers are detected. There's no need to make a frontend; you can simply use something like postman to upload the csv to the web service.

We would like you to Dockerize your application and to aid we have provided you with a base docker compose file (use docker-compose to connect the containers) to simplify the process to remove the need to configure postgres although feel free to use any sql database:

version: '2'

services:

postgres:

image: postgres:9.3

ports:

- "5432:5432"

Feel free to add your service to this.

Test

You are provided with two test csv files. One that passes and one that fails shown here:

==TestOne

timestamp,value,category

2022-01-01 00:00:00,10,A

2022-01-01 01:00:00,12,B

2022-01-01 02:00:00,11,C

2022-01-01 03:00:00,13,A

2022-01-01 04:00:00,9,B

2022-01-01 05:00:00,10,C



2022-01-01 06:00:00,12,A

2022-01-01 07:00:00,11,B

2022-01-01 08:00:00,13,C

2022-01-01 09:00:00,10,A

==TestTwo

timestamp,value,category

2022-01-01 00:00:00,10,A

2022-01-01 01:00:00,12,B

2022-01-01 02:00:00,11,C

2022-01-01 03:00:00,13,A

2022-01-01 04:00:00,9,B

2022-01-01 05:00:00,10,C

2022-01-01 06:00:00,12,A

2022-01-01 07:00:00,11,B

2022-01-01 08:00:00,100,C

2022-01-01 09:00:00,10,A



Timescale

Please provide your code at the soonest opportunity. If you have any questions please contact Thomas.Nickson@urbantide.com