

Case: Cloud Engineer / Developer in Cloud Analytics og MLOps

You should choose one of the two tasks below, and present your chosen task during the interview:

1. Develop a solution in Python that exposes an API following the specifications below.
2. Present a code repository that you consider relevant for this position and have either developed yourself or have contributed to significantly.

Specifications for task 1:

1. Create an interface to a film dataset (<https://www.kaggle.com/code/priy998/imdb-sqlite/input>) which allows the user to run SQL-requests directly against the database.
 - a. Implement an SQL-request that returns all directors.
 - b. Implement an SQL-request that returns all films.
 - c. Implement an SQL-request that returns the five directors whose films have the highest average rating.
2. Create a web API in Python which uses your database interface to do the following:
 - a. List all films in the database
 - b. List all directors in the database
 - c. Possibility to filter by director name and film title.
 - d. Possibility to sort results by director name and film title.
3. The API should return data in JSON-format.

Technical specifications:

1. The interface to the database should be implemented using the SQLite3 package in Python
2. Use a framework like fastAPI, Flask, or similar to implement the web API.
3. The web API should be implemented using GET-methods to list films and directors.

Some tips:

1. When you connect to the sqlite database use the absolute path to avoid bugs:
 - a. `DATABASE_PATH = os.path.abspath(os.path.join(os.path.dirname(__file__), 'movie.sqlite'))`
2. Create a new cursor object for each request.