Project:
Operationalize a Machine Learning...

SEARCH

RESOURCES

CONCEPTS



## Project Overview

In this project, you will apply the skills you have acquired in this course to operationalize a Machine Learning Microservice API.

You are given a pre-trained, `sklearn` model that has been trained to predict housing prices in Boston according to several features, such as average rooms in a home and data about highway access, teacher-to-pupil ratios, and so on. You can read more about the data, which was initially taken from Kaggle, on the data source site. This project tests your ability to operationalize a Python flask app—in a provided file, `app.py`—that serves out predictions (inference) about housing prices through API calls. This project could be extended to any pre-trained machine learning model, such as those for image recognition and data labeling.

Housing price prediction.

### Project Tasks

Your project goal is to operationalize this working, machine learning microservice using kubernetes, which is an open-source system for automating the management of containerized applications. In this project you will:

- Test your project code using linting
- Complete a Dockerfile to containerize this application
- Deploy your containerized application using Docker and make a prediction
- Improve the log statements in the source code for this application
- Configure Kubernetes and create a Kubernetes cluster
- Deploy a container using Kubernetes and make a prediction
- Upload a complete Github repo with CircleCI to indicate that your code has been tested

You can find a detailed project rubric, here.

**The final implementation of the project will showcase your abilities to operationalize production microservices.**