

MLOps and Cloud Native

AI/ML: Data and Machine learning operationalization



Presented by:

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- ❖ Ex Adjunct professor at euro-Mediterranean university of Fez
- ❖ Machine Learning and Big Data professional trainer
- ❖ Ex Professor at ENSIAS
- ❖ Research interests:
 - Data/Web mining and Natural language processing
 - Knowledge graphs and Machine learning/deep learning
 - Information retrieval and recommender systems



Assignment instructions



- Pick one of the following datasets:

House Sales in King County, USA

Predict house price using regression



IMDB Dataset of 50K Movie Reviews

Large Movie Review Dataset



Student Mental health

A STATISTICAL RESEARCH ON THE EFFECTS OF MENTAL HEALTH ON STUDENTS' CGPA dataset



Assignement instructions



- Using Mlflow
 - Start by preprocessing your data
 - Train 5 ML models
 - Try to track models performance, versions and parameters
 - Save your best model in ONNX format and its dedicated preprocessing transformations (i.e., using transformers API) in pickle format
- Using FastAPI
 - Using the serialized files
 - Create a REST API for your model
 - Package your model as a container using Docker as a container runtime
 - Consume your created APIs using Postman
- Using Flask
 - Create a dedicated application to consume your API
 - Package your application as a container using Docker
- Bonus
 - Deploy your API using Heroku
 - Deploy your containerized API using Azure Container Instance