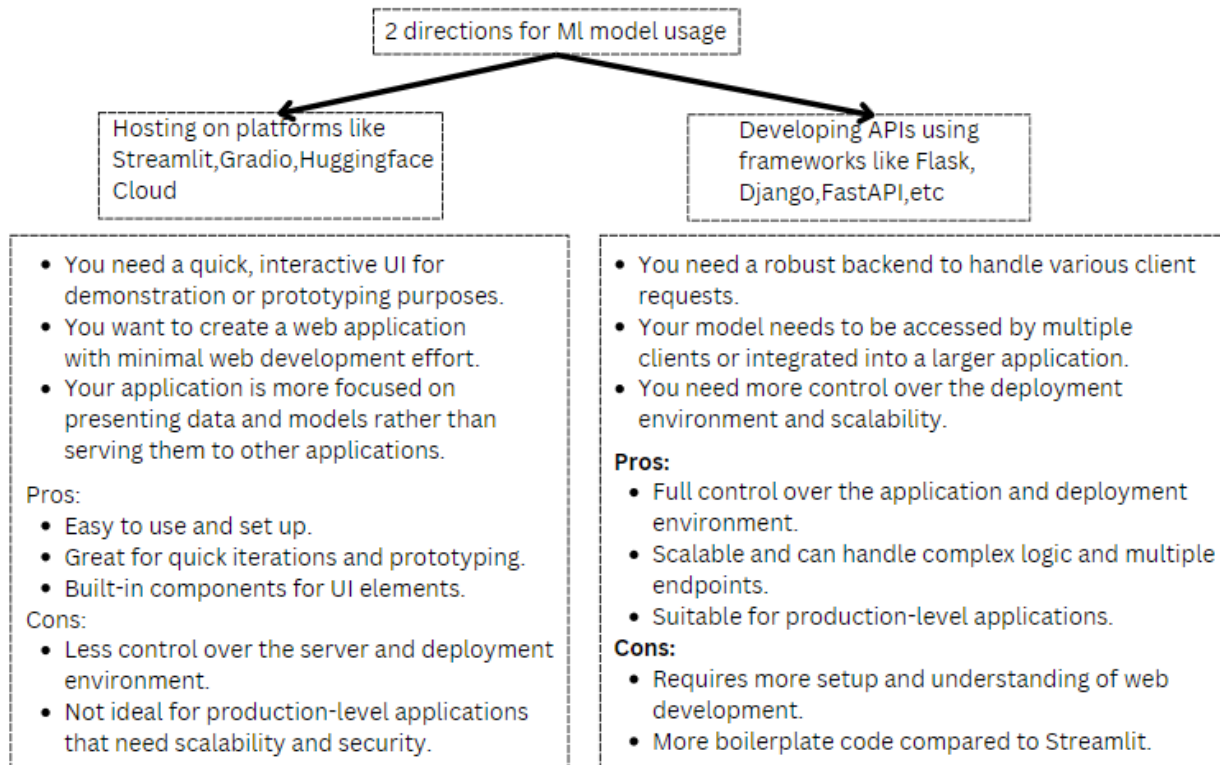


# ML Dev Deployment of ML models

The flowchart below will help you to better understand basic deployment methods





## Process 1- Expose Model As An API




1. Model Training will happen in server
2. You can save model with .pkl, .sav, .pb, .h5, .pt, .pth, .tfjs extensions
3. You can host these models in server side using frameworks like Flask, Django, Falcon, Klein and expose it as API
4. These API can be consumed by any front end application including mobile app

## What should you learn?

Model deployment in machine learning is the process of integrating your model into an existing production environment where it can take in an input and return an output. The goal is to make the predictions from your trained machine learning model available to others

- <https://builtin.com/machine-learning/model-deployment>
-  Gradio Crash Course - Fastest way to build & share Machine Learn...
-  Gradio Course - Create User Interfaces for Machine Learning Models (too long but it will help you to understand code and the flow better)
- [\[2024 Spring\] Data Engineering - Deploying ML models and creating demos with Streamlit and Gradio](#) (watch 2x)
- <https://webcache.googleusercontent.com/search?q=cache:https://calistussaratuki.medium.com/embedding-a-machine-learning-model-model-into-a-gui-d3745e63e6> (Code implementation of Streamlit and Gradio)
- You can also see **streamlit community cloud** - a low code cloud deployment platform

## Custom APIs for models

- <https://konghq.com/blog/learning-center/different-api-types-and-use-cases> ( We will be using **RestAPIs**- POST,GET,DELETE,etc HTTP methods)
- <https://www.enjoyalgorithms.com/blog/api-introduction-for-data-science-and-ml>
-  Machine Learning And Deep Learning Model Deployment Architecture Using A...
- [FastAPI: The Modern Toolkit for Machine Learning Deployment | by Reza Shokrzad | Medium](#)
- 
- <https://towardsdatascience.com/creating-restful-apis-using-flask-and-python-655bad51b24> (Code template for Flask)
-  Deployment of Deep Learning Model using Flask
- [fastapi2postman: Automate Your FastAPI to Postman Collection Conversion | by Ashhad Ahsan Rehman | Medium](#)
-  I built the same app 3 times | Which Python Framework is best? Django vs ... (Flask,Django,FastAPI)

## Integrating FlaskAPI(backend) with Streamlit(UI)

- <https://www.restack.io/docs/streamlit-knowledge-streamlit-flask-api-integration>
- <https://freedium.cfd/https://python.plainenglish.io/building-a-web-application-with-flask-and-streamlit-279cf577d973> (this article is paid on medium so freedium gives access)