What is FastAPI?

FastAPI is the Python framework for building APIs.

Similar Python frameworks are: -

Django, Flask, Streamlit, Dash

How does FastAPI stand-out in comparison with other Python-based frameworks?

FastAPI is a default choice since it: -

1) <u>Can handle heavy traffic</u> since it is an Asynchronous Server Gateway Interface (ASGI) based framework that allows a single process to handled multiple requests concurrently.
2) <u>Can handle high responsiveness</u> because of its asynchronous endpoints using Python's native async/await syntax. This syntax enables app to perform non-blocking I/O operations which is crucial for responsiveness for high traffic.
3) <u>Leverages UviCorn which is lightweight</u>, consuming minimal memory resources compared to traditional web servers.
4) Leverages <u>Pydantic library for data validation and serialization</u>. Pydantic provides minimum boilerplate unlike the verbose JDK serialization.
5) <u>Supports automatic generation of OpenAPI (Swagger UI)</u> hence, allowing well-documented API development.

- Due to the above characteristics, FastAPI is a popular choice for building AI-related technologies such as Langchain.
- It is relevant in transforming a trained model from a notebook and deploying it into production-ready API. Other applications, like a web app or mobile app can make requests to API to receive predictions.

References: -

1) https://fastapi.tiangolo.com/tutorial/