Q1. How does the DVC pipeline save time and reduce errors compared to running scripts manually?

DVC automates the workflow by only rerunning the stages affected by changes. This avoids repeating unnecessary steps and reduces human errors from running scripts in the wrong order. It also ensures that preprocessing, training, and evaluation are always consistent with the parameters used.

Q2. Which stages were automatically rerun when parameters changed?

When I changed hyperparameters in `params.yaml`, only the **train** and **evaluate** stages were rerun, while the **preprocess** stage was reused from cache. This shows that DVC understands dependencies and saves time by not recomputing unchanged parts.

Q3. How does DVC help in reproducing experiments and tracking metrics?

DVC keeps a clear record of datasets, parameters, models, and metrics for each experiment. With a single command (`dvc repro` or `dvc exp show`), I can reproduce results or compare experiments side by side, ensuring transparency and easy collaboration.