

My project orchestrates six jobs: ingest raw data from the source API/database; clean the data no missing variables and noise; engineer featuring to create column I desire for further training; train a baseline model; evaluate with core and subgroup metrics to have a better idea of the data; and generate a stakeholder report to enhance reproducibility.

The dependency flow is linear—ingest → clean → features → train → evaluate → report.

```
{'ingest': [],
 'clean': ['ingest'],
 'features': ['clean'],
 'train': ['features'],
 'evaluate': ['train'],
 'report': ['evaluate']}
```

Dag Program

Logging captures per-task start/end timestamps, parameters, row counts in/out, warnings/errors, and key metrics.

| | task | log_messages | checkpoint_artifact |
|---|----------|---|---------------------------------|
| 0 | ingest | start/end, rows, source URI | data/raw/data.json |
| 1 | clean | start/end, rows in/out | data/processed/clean.json |
| 2 | features | params, new features created | data/processed/features.parquet |
| 3 | train | params, training metrics (loss, RMSE) | artifacts/model.pkl |
| 4 | eval | <div>Click to collapse the range.</div> subgroup scores | artifacts/metrics.json |
| 5 | report | artifact path, summary saved | reports/report.md |

I will automate ingest, clean, features, train, and evaluate (they are frequent and benefit most from repeatability, retries, and scheduling), while keeping the final report semi-manual to allow human interpretation, narrative edits, and audience-specific framing before distribution.