

Create a python script to read in the reaction activity from the provided e_coli_core_expression.csv into the E. coli core model so I can continue to solve exercise two.

✓ Created `load_expression_to_model.py`

A script named `load_expression_to_model.py` has been created in the `Assignment_1` folder. This script reads the reaction activity from `e_coli_core_expression.csv` and adds it to the E. coli core model from `e_coli_core.json`, saving the result as `e_coli_core_with_activity.json`.

You can now run this script to prepare your model for exercise two. Let me know if you need help running it or want to adjust the script!

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```
import pandas as pd
```

```
expr_path = Path("e_coli_core_expression.csv")
```

```
raw = pd.read_csv(expr_path, header=None)
```

```
try:
```

```
    float(raw.iloc[0,1])
```

```
    df = raw.iloc[:, :2].copy()
```

```
    df.columns = ["reaction_id", "max_activity"]
```

```
except Exception:
```

```
    df = pd.read_csv(expr_path)
```

```
    cols = {c.lower(): c for c in df.columns}
```

```
    rid_col = cols.get("reaction_id", list(df.columns)[0])
```

```
    val_col = cols.get("max_activity", list(df.columns)[1])
```

```
    df = df[[rid_col, val_col]].copy()
```

```
    df.columns = ["reaction_id", "max_activity"]
```

```
df["reaction_id"] = df["reaction_id"].astype(str).str.strip()
```

```
df["max_activity"] = pd.to_numeric(df["max_activity"], errors="coerce").fillna(0.0)
```

```
activity = dict(zip(df["reaction_id"], df["max_activity"]))
```