

Python Virtual Environment Setup

Backend API Environment

Initial Setup

1. Navigate to the backend directory:

```
bash  
  
cd backend
```

2. Create a virtual environment:

```
bash  
  
python3 -m venv venv
```

3. Activate the virtual environment: On macOS/Linux:

```
bash  
  
source venv/bin/activate
```

On Windows:

```
bash  
  
venv\Scripts\activate
```

4. Install dependencies:

```
bash  
  
pip install -r requirements.txt
```

Running the Flask API

With the virtual environment activated:

```
bash  
  
python app.py
```

The API will be available at `http://localhost:5001`

Research Scripts Environment

If you need to run the research scripts:

```
bash

pip install -r research_requirements.txt
```

Then run research:

```
bash

python jazz_song_research.py "Song Name"
```

Or batch research:

```
bash

python batch_research.py sample-songs.txt
```

Deactivating the Virtual Environment

When you're done working:

```
bash

deactivate
```

Reactivating Later

Whenever you return to work on the project:

```
bash

cd backend
source venv/bin/activate # macOS/Linux
# or
venv\Scripts\activate    # Windows
```

Troubleshooting

If `python3` command not found:

Try `python` instead of `python3`

If you need to recreate the environment:

```
bash  
  
rm -rf venv  
python3 -m venv venv  
source venv/bin/activate  
pip install -r requirements.txt
```

Checking if virtual environment is active:

You should see `(venv)` at the beginning of your terminal prompt

Database Configuration

The app uses environment variables for database connection. These are currently hardcoded in `app.py`:

- `DB_HOST`: db.wxinyotnrqxrwrtpkp.supabase.co
- `DB_NAME`: postgres
- `DB_USER`: postgres
- `DB_PASSWORD`: jovpeW-pukgu0-nifron
- `DB_PORT`: 5432

For production, set these as environment variables instead of using the defaults.