

# AutoCull End-User Documentation

Group 11

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# 1 Introduction

**AutoCull** is an intelligent image management application that automatically identifies and removes near-duplicate or low-quality photos from a given collection. The program leverages AI/ML techniques to both streamline large-scale photo curation, and improve the user's photographic abilities.

This document serves as a comprehensive guide for end users, covering installation, usage, configuration, and troubleshooting.

## 2 System Requirements

- Operating System: Windows 10 or later / macOS / Linux
- Python 3.10 or higher
- PostgreSQL 14 or higher
- Recommended RAM: 8 GB+
- Disk space: Minimum 1 GB free

## 3 Installation Guide

### 3.1 Step 1: Clone or Download the Repository

```
git clone https://github.com/Manwithacape/COSC345---Group_11.git
cd COSC345---Group_11
```

### 3.2 Step 2: Create a Virtual Environment

```
python -m venv venv
source venv/bin/activate          # macOS/Linux
venv\Scripts\activate            # Windows
```

### 3.3 Step 3: Install Dependencies

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

### 3.4 Step 4: Set Up PostgreSQL Database

AutoCull uses PostgreSQL to store image metadata, similarity metrics, and user preferences.

1. Install PostgreSQL 14 or higher from <https://www.postgresql.org/download/>.
2. During installation, note your chosen **username**, **password**, and **port number** (default is 5432).

3. Open the PostgreSQL interactive terminal:

```
psql -U postgres
```

4. Create a new database and user for AutoCull:

```
CREATE DATABASE autocull_db;  
CREATE USER autocull_user WITH PASSWORD 'yourpassword';  
GRANT ALL PRIVILEGES ON DATABASE autocull_db TO autocull_user;
```

Example contents:

```
{  
  "dbname": "autocull_db",  
  "user": "autocull_user",  
  "password": "yourpassword",  
  "host": "localhost",  
  "port": 5432  
}
```

5. Initialize the schema using file contents from `schema.db`: You should see a confirmation message indicating that tables were created successfully.

## 3.5 Step 5: Launch AutoCull

```
python app.py
```

If the program launches successfully, you should see the AutoCull interface.

# 4 Using AutoCull

## 4.1 Basic Workflow

1. Launch AutoCull.
2. Import images by selecting "Import" from the sidebar.
3. AutoCull scans for near duplicates and low-quality images.
4. Review detected clusters of similar images.
5. Confirm deletion or move duplicates to a separate folder.

## 4.2 GUI

The GUI provides options for:

- Photo importing
- Viewing detected duplicates
- Marking photos for deletion
- Previewing detected duplicates

- Batch delete/move operations
- Viewing collections
- Creating collections
- Viewing exif data
- Viewing image metrics

## 5 Troubleshooting

- **Program doesn't start:** Ensure Python 3.10+ is installed and dependencies are correctly installed.
- **Database connection error:** Verify that PostgreSQL is running and credentials in `db_config.json` are correct.
- **No duplicates found:** Try lowering the `threshold` value.
- **Slow performance:** Use smaller batches or disable subfolder recursion.
- **Permission errors:** Run as administrator or check write permissions on output directories.

## 6 About

This application was developed as part of a university project for COSC345. For more information, visit the GitHub repository: [https://github.com/Manwithacape/COSC345---Group\\_11](https://github.com/Manwithacape/COSC345---Group_11)

Please do not attempt to contact anyone regarding bugs, issues, or feature requests. These will likely not be addressed.

## 7 Credits and License

Developed by **Group 11, COSC345 2025 S2** as part of the AutoCull project.

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