# Google Photos Bulk Description Automation Project

## Project Overview

I need to automate adding names to photo descriptions/captions in Google Photos. I have thousands of photos organized in face groups, and I want to add the person's name to each photo's description field.

## Current Situation

- Photos are already organized using Google Photos' face grouping feature
- I've been doing this manually and am currently at year 1998 with thousands of photos remaining
- I need to work through multiple face groups, each containing many photos
- Manual process is time-consuming: opening each photo individually, clicking into info/description, typing the name, saving

## Technical Context

- Google Photos API does NOT support editing descriptions/captions (confirmed limitation)
- Web scraping/browser automation is the viable approach
- I'm working on Windows and/or macOS
- Photos are accessed through Google Photos web interface (photos.google.com)

## What I Need

A browser automation script that can:

1. **Navigate to Google Photos** and handle authentication (I'll log in manually first)
2. **Access a specific face group** (I'll provide the person's name/group)
3. **Iterate through all photos in that group**:
   - Open each photo
   - Locate the description/info/caption field
   - Add the specified text (person's name) to the description
   - Save the changes
   - Move to the next photo
4. **Handle errors gracefully**:
   - Skip photos that already have descriptions (optional)
   - Log any failures for manual review
   - Avoid triggering rate limits or anti-bot measures
5. **Provide progress tracking**: Show which photos have been processed

## Technical Preferences

- **Language**: Python preferred (using Selenium or Playwright)
- **Operating Systems**: Should work on both Windows and macOS
- **Safety**: Must include delays between actions to avoid detection/rate limiting
- **Reliability**: Should be able to resume if interrupted

## Required Features

□ Easy configuration (person's name, face group selection)
□ Visible browser window so I can monitor progress
□ Progress logging (console output showing which photo is being processed)
□ Error handling and recovery
□ Ability to pause/resume
□ **Human-like behavior simulation** (anti-bot detection):

- Randomized delays between actions (3-8 seconds, not fixed intervals)
- Process photos in random order (not sequential)
- Take random breaks between batches (process 5-15 photos, then pause 30-120 seconds)
- Vary the pace throughout the session
- Include random mouse movements to buttons (no teleporting)
- Vary typing speed when entering names (not instant)
- All timing should have natural variation to avoid detection as automated
- Target reasonable processing rate: 100-200 photos per hour maximum
- Vary session lengths (don't run for many hours without stopping)

## Setup Requirements I'm Willing to Do

- Install Python and required libraries
- Install Chrome/Chromium browser and WebDriver
- Log into Google Photos manually before running script
- Provide configuration (person names, group URLs if needed)

## Questions to Address in Solution

1. How do I identify/select a specific face group to process?
2. How does the script handle Google Photos' dynamic loading of images?
3. What happens if the description field already has content?
4. How can I test this on a small batch before running on thousands?
5. What's the estimated processing speed (photos per hour)?

## Success Criteria

- Script successfully adds names to photo descriptions
- Can process hundreds/thousands of photos without manual intervention
- Doesn't get blocked or rate-limited by Google
- Can be reused for multiple different face groups (different people)
- Saves me significant time compared to manual editing

## Additional Context

- I'm committed to this project and willing to learn/troubleshoot
- I understand this may require leaving my computer running for extended periods
- I'm open to suggestions for improvements or alternative approaches
- I have basic technical skills but may need step-by-step setup instructions

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**When ready, please provide:**

1. Complete setup instructions for my operating system
2. The automation script with clear comments
3. Step-by-step usage guide
4. Troubleshooting tips for common issues
5. Safety recommendations (rate limiting, session management)