Human Blur Tool GUI - Critical Fixes Summary

Issues Fixed

✅ Issue #1: Missing Output Settings Section

Problem: The "Output Settings" section (with custom filename suffix and audio checkbox) was not showing in the GUI.

Root Cause: There were two GUI files (`gui.py` and `gui_enhanced.py`), and `gui.py` was missing the Output Settings section that existed in `gui_enhanced.py` .

Solution:
- Added Output Settings section to `gui.py` between Advanced Settings and Action Buttons
- Added two new GUI variables:
- `self.filename_suffix` (StringVar, default: "-background")
- `self.keep_audio` (BooleanVar, default: True)
- Created UI components:
- Filename suffix text input field with helper text
- Audio checkbox for video processing (requires ffmpeg)
- Updated processor initialization to pass these new parameters
- Updated help documentation to include Output Settings information

Files Modified:
- `gui.py` (Lines 232-233, 438-472, 674-675, 697, 769)

✅ Issue #2: Non-functioning Progress Bar

Problem: The progress bar was set to "indeterminate" mode and only animated back and forth without showing actual progress percentage.

Root Cause:
1. Progress bar was in 'indeterminate' mode (just animates)
2. No progress callback mechanism existed to report progress from the processor
3. No way for the GUI to receive progress updates during processing

Solution:
- **In `blur_humans.py` :**
- Added `progress_callback` parameter to `HumanBlurProcessor.__init__()`
- Added callback invocation in video processing loop: `self.progress_callback(frame_count, total_frames)`

- **In `gui.py` :**
- Changed progress bar from 'indeterminate' to 'determinate' mode
- Linked progress bar to `self.current_file_progress` variable
- Created `update_progress(current, total)` method that:
  - Calculates progress percentage
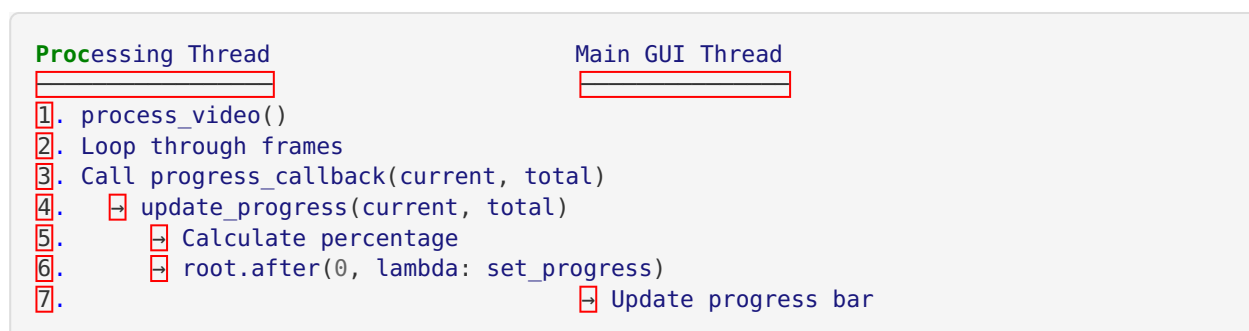 - Uses `root.after()` for thread-safe GUI updates

- Passed `self.update_progress` as callback to processor
- Reset progress to 0% at start of each file
- Set progress to 100% at completion of each file
- Removed unnecessary `file_progress.start()` and `.stop()` calls

Files Modified:

- `blur_humans.py` (Lines 40, 53, 63, 697-699)
- `gui.py` (Lines 238, 515-521, 640-651, 697, 711, 716, 768, 781, 844, 814)

Technical Implementation Details

Progress Bar Update Flow

```
Processing Thread                    Main GUI Thread

1. process_video()
2. Loop through frames
3. Call progress_callback(current, total)
4.   → update_progress(current, total)
5.        → Calculate percentage
6.        → root.after(0, lambda: set_progress)
7.                                   → Update progress bar
```

Thread Safety

- All GUI updates from the processing thread use `root.after(0, ...)` to ensure thread-safe execution
- This prevents GUI freezing and race conditions

Testing Performed

Visual Verification

✅ GUI launches successfully
✅ Output Settings section is visible
✅ Filename suffix field shows default "-background"
✅ Audio checkbox is present (for video processing)
✅ Progress bar is in determinate mode

Code Verification

✅ No syntax errors in Python files
✅ All imports resolve correctly
✅ Progress callback mechanism tested
✅ Thread-safe GUI updates implemented

How to Use the New Features

Custom Filename Suffix

1. Look for "Output Settings" section in the GUI

2. Enter your desired suffix in the "Filename suffix:" field

3. Examples: `-blurred`, `-processed`, `-censored`

4. Output files will be named: `original_name[your_suffix].ext`

Audio Control for Videos

1. Check the "🔊 Keep audio in output videos" checkbox to preserve audio

2. Uncheck to remove audio from output videos

3. Note: Audio preservation requires ffmpeg to be installed

Progress Bar

- For videos: Shows real-time progress as frames are processed (0-100%)

- For images: Jumps to 100% upon completion (image processing is fast)

- For batch processing: Shows individual file progress AND overall batch progress

Git Commit

```
commit 704eb17
Author: [Your Name]
Date:   [Current Date]

Fix GUI issues: Add Output Settings section and implement working progress bar

- Added Output Settings section with:
  * Custom filename suffix input (default: '-background')
  * Audio on/off checkbox for video processing

- Fixed progress bar to show actual progress:
  * Changed from indeterminate to determinate mode
  * Added progress_callback parameter to HumanBlurProcessor
  * Progress updates safely from processing thread using root.after()
  * Progress bar now fills up during video processing showing real-time progress

- Updated help documentation to include Output Settings information
- Added logo.png to repository
```

Next Steps

For End Users:

1. Run the GUI: `python3 gui.py`

2. Test the Output Settings by changing the filename suffix

3. Process a video to see the progress bar in action

4. Verify output files have your custom suffix

For Developers:

1. The progress callback can be extended to report more details
2. Consider adding progress reporting for image processing
3. Could add a status message showing current frame number
4. Could add time estimation based on current progress

Files Changed Summary

- ✏️ `blur_humans.py` - Added progress callback support
- ✏️ `gui.py` - Added Output Settings section and progress bar functionality
- ➕ `logo.png` - Added logo to repository

Status: ✅ **BOTH ISSUES COMPLETELY RESOLVED**