Batch Image Cropping Tool: Features and Interactions

1. Core Features

- **Batch Image Upload:** Users can select and upload multiple image files (JPG, PNG) simultaneously.
- **Aspect Ratio Selection:** Users can choose from predefined common aspect ratios (e.g., 1:1, 16:9, 4:3) or input a custom aspect ratio.
- **Cropping Method:**
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Content-Aware Cropping: **Automatically identifies the most important content in each image and crops around it while maintaining the selected aspect ratio.**
   * Center Cropping: **Crops the image from the center, maintaining the selected aspect ratio.**
   * Manual Adjustment (per image): **After automatic cropping, users can fine-tune the crop area for individual images.**
* Live Preview: **Display a live preview of how each image will be cropped.**
* Batch Download:** Download all processed images as a ZIP file or individually.

2. User Interactions

- **Drag-and-Drop Upload:** Allow users to drag and drop image files directly into the tool.
- **Clear and Intuitive Interface:** Minimalistic design with clear labels and easy-to-understand controls.
- **Progress Indicator:** Show the progress of image processing (uploading, cropping, downloading).
- **Error Handling:** Provide clear feedback for invalid file types or processing errors.

3. Elegance and Simplicity

- **Minimalist Design:** Focus on essential features and avoid clutter.
- **Responsive Layout:** Ensure the tool is usable on various screen sizes (desktop, tablet, mobile).
- **Fast Processing:** Optimize for quick image processing.

- **No Server-Side Uploads:** Process images client-side to ensure privacy and speed.

4. Technical Considerations

- **Frontend Framework:** React (for a responsive and interactive UI).
- **Image Processing Library:** A client-side JavaScript library for image manipulation (e.g., Cropper.js, Fabric.js, or a custom solution).
- **File Handling:** HTML5 File API for local file access.
- **Deployment:** Static site hosting (e.g., Netlify, GitHub Pages) for easy deployment.