## 1. Error Handling and Logging

- Add checks and exception handling for missing files or directories, especially in methods like `load\_from\_disk`, `os.listdir`, and when reading images. This would prevent crashes if expected files or directories are absent.
- Ensure that the model loading (especially when dealing with directories or files like `'./ner\_model'`) has error handling in place, in case the directory or files are corrupted or absent.
- Handle cases where the images might not be compatible (e.g., not in the expected format, corrupted, etc.).
- Replace `print` statements with a more sophisticated logging mechanism
- For longer-running operations like image processing, add progress bars or something like this.

## 2. Optimization

- Parallelize image loading and processing
- 3. Improved Visualization
  - Add better visualizations for keypoint matches to allow inspecting the images and matches more easily. Also add more numeral data about keypoint matches to image.
- 4. Modularization and Clean Code
  - Some methods, especially in 'ImageMatcher', could be refactored, for easier usage and understanding.
  - Externalizing configurable parameters (e.g., image directory, max image count, model path) into a configuration file so the code is more adaptable and reusable.
- 5. Cross-Platform Compatibility
  - Creating a Docker container for the entire environment, making it easier to deploy the model and codebase in different environments.
- 6. Model Update
  - Add the ability to fine-tune the LoFTR model or replace it with more advanced models.
  - Increase the size and diversity of the dataset, add data augmentation and experiment with different learning rates, batch sizes, number of epochs to improve models performance.