OpenCV and Pillow

Image processing has vast use in various industries including banking, fraud detection, National security, medical imaging and disease detection. Image processing is a technique used to extract needed information from an image (Vedarutvija & Rao, 2023). OpenCV (Open-Source Vision Library) developed by Intel is a computer vision library that uses the languages python, C++, Java, C and Assembly language. It is the World’s largest computer vision library (OpenCV, 2024). It is a library of programming functions for real time computer vision while Pillow (Python imaging Library) was developed by Fredrik Lundh and Contributors as the name suggests is a python imaging library.

Applications for pillow include basic image manipulation, addition of filters and effects, image compositing, automated image enhancements and image format conversion.

Applications for OpenCV include real time object detection, computer vision in robotics, image segmentation and video processing.

An illustration for use in a “day in the life” of a developer who works using face recognition and face capture technologies would be applicable in biometrics or biological measurements.

The day would start with a team meet early and ideas would be bounced between the team. Projects will be allocated, or the group may decide to work together. The key responsibilities for the day would involve Algorithm design, Image processing, work with machine learning models, code optimization, collaboration, research and development, testing and validation and documentation as these are the responsibilities of a computer vision Engineer (Alvi, 2024). There would be breaks during the day. A time would be agreed to reconvene and evaluate each team member’s progress. The team progress will be evaluated, and the cycle will be repeated till all the goals are accomplished.

What was picked up through this project is the training opportunities, courses and continuous learning process available through both opensource platforms of Pillow and OpenCV.

Alvi, F. (2024, September 10). *Role of a computer vision engineer: Key responsibilities & pathways to success*. OpenCV. https://opencv.org/blog/computer-vision-engineer-role-and-responsibility/

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Vedarutvija, J., & Rao, A. (2023, June 20). *Image Processing: Comparison & Analysis of Image Formats*. November 2023|Issue XI | Best Journals. https://www.ijraset.com/ijraset-volume/volume11-issuexi-november2023