



**PYIMAGESEARCH**

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To whom it may concern,

This letter is to acknowledge the contributions that Mr. Rahul Patel has made to PylImageSearch.com to the computer vision and image processing community as whole.

Rahul came to me in January 2015 asking if I would be willing to take him on as an intern. After presenting me with his grades, course accomplishments, and a prototype of a computer vision project to recognize Optical Mark Reader test cards he was working on at his local university, I accepted.

From the months of January 2015 to July 2015 I assigned Rahul various projects related to computer vision, OpenCV, and the Python programming language, including:

- The watershed algorithm: Rahul implemented the watershed algorithm using the OpenCV and scikit-image library to count the number of coins in a given image. He extended this project in an attempt to count the number of red blood cells in a microscopic slide image. However, time did not permit this extension of the project to be completed.
- Morphological operations: Rahul researched and implemented basic morphological operations using OpenCV. He also wrote a short report detailing when each method should be used.
- Smart face cropper: Using the Viola-Jones algorithm and the Haar cascades provided by the OpenCV library, Rahul created a smart face cropping algorithm to (1) detect faces in images and (2) crop the faces from the images in a manner that respected aspect ratio and size. Such an implementation would be most suited for a social media website looking to automatically crop profile picture uploads.
- Studied dominate colors in an image: As a final project, Rahul attempted to create a Python script to detect the dominant colors in an image using the k-means algorithm. However, due to time constraints related to school work, this project was not completed. However, the effort that Rahul put into the project was commendable.

Above all, Rahul is a hard worker and a self-starter. If he does not understand a topic he will take it upon himself to study and learn more about it before asking for help. While our time working together was brief, it was a pleasure to have him onboard.

Sincerely yours,

Adrian Rosebrock, PhD  
Owner, PylImageSearch.com