CUDA Program Two

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In this program I present a solution to Problem Set 2 from Udacity's *Intro to Parallel Programming* course. This program implements a parallel algorithm for applying a Gaussian blur to images. All modified functions are in the *student_func.cu* file. For this assignment I increased the number of threads to 1024 in order to eek more performance out of the program.

The first conecptual step in this program is to reorder the data, from contiguous pixel structures to arrays of RGB values. This is a common operation in parallel computing referred to as converting an Array of Structures to a Structure of Arrays. We launch a kernel per pixel in the natural way, and call the *separateChannels* function for each. This separates the image into three distinct data structures, each holding one color channel.