Image processing with Python

Working with images is an invaluable skill in scientific computing. There is so much information hidden away in images that can be accessed with knowledge about the right kind of tools and filters.

Consider the image below:

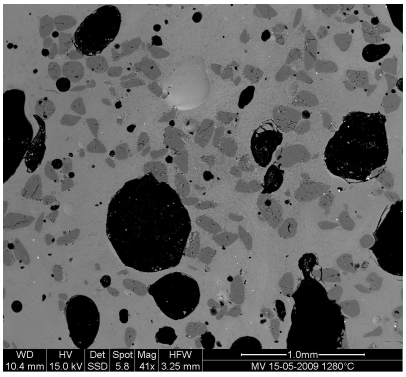

Figure 1: SEM glass sample

This is an image of a sample of glass produced by a scanning electron microscope. Visible in the image are three distinct "phases" :

1. Glass matrix (light gray)
2. Unmolten sand particles (darker gray)
3. Voids/bubbles (black)

Your objectives are:

1. Determine the approximate fraction of each phase in the sample
2. Determine the average size of the voids