# My solution

Crop images to just the chip. Import into python as matrices of pixel intensities. Subtract all pixels by the average pixel intensity. Find the plane of best fit for z=Ax+By. Then, iterate across all pixels and subtract the value Ax+By. Create a 1-D array for all pixel intensity values, and say that the lowest k% are voids.

# Edge Detection

Paper: [Robust automatic void detection in solder balls | IEEE Conference Publication | IEEE Xplore](https://ieeexplore.ieee.org/abstract/document/5495524)

Method is: detect edges, close the open contours, filter out contours that aren’t actually voids.

# Machine Learning

Paper: [Void detection in solder bumps with deep learning - ScienceDirect](https://www.sciencedirect.com/science/article/pii/S0026271418305006)